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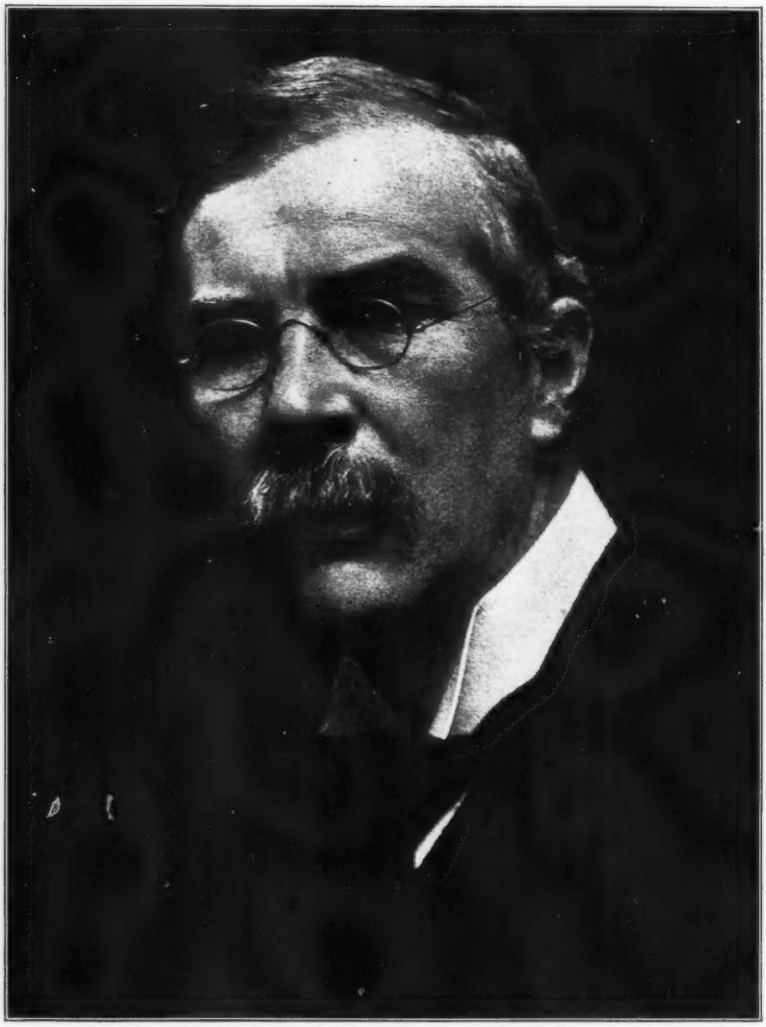

A. E. Wright

SIR ALMROTH WRIGHT IS THE FATHER OF MODERN BACTERIN THERAPY. HIS DISCOVERY OF THE OPSONINS BROUGHT IN A NEW EPOCH IN THERAPY. SEE DOCTOR ACHARD'S ARTICLE ON PAGE 23

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The New Year

IT SEEMS almost like mockery to be wishing one another a Happy New Year in these sad times. With the stars falling from Heaven, and Christ in the tomb, and war, pestilence and famine abroad, and men's hearts failing them for fear, and God knows what fate or doom hanging over the world's head, how shall we, can we, bid each other a Happy New Year? Or, what meaning shall such a greeting have upon our lips?

Never in the history of the modern world, I am sure, have New Year's greetings been exchanged under conditions of such solemn and ominous portent as at the opening of this year of grace nineteen hundred and fifteen. Not since the great event that ushered in the Christian era has there been such a portentous upgathering of cosmic events as that which now confronts the peoples of the earth. We cannot doubt that we are beholding—nay, taking part in—some great and terrible day of the Lord. The sun has been turned into darkness and the moon into blood. It almost seems as though the New Testament prophecy were finding fulfilment: that "in those days shall be tribulation such as there hath not been the like from the beginning of the creation which God created until now."

In the midst of such conditions, can we wish each other a glad New Year with the same light hearts and happy faces, and confident, hopeful minds with which in the years gone by we have been wont to meet and greet this ever-joyous festival occasion?

Yes, I feel certain we can. Not, maybe, with quite such *light* hearts, but, yet, with hopefulness and confidence, not only equal to, but much higher and much deeper than that which any other New Year's Day in our lives has inspired.

Let us look about with fearless eye and see. First of all, there is no occasion for panic. I have said that the times are portentous and ominous; but they portend good and not evil. Out of this hell there will issue something far better than any living soul has yet dreamed. The Old World is in its death-throes; nor is it likely that we can escape the shock of the catastrophe. But after all, we in America belong to the new era, and we, at least, can look through it and beyond it. We scarcely can doubt that the convulsion we are witnessing is not so much a death-throe as a birth-pang, heralding the birth of an era almost —and I speak reverently—as glorious as that which was ushered in by darkness and earth-

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quake and the rending of the temple's veil nearly two thousand years ago.

It is not a time for consternation and despair, but for faith and optimism. It is not a time to run hither and thither, calling upon the rocks to fall upon us and the mountains to hide us, but, rather, to keep steadfastly and quietly at our tasks and with solemn joy await the dawn, not of a New Year only, but of a new, more happy era. However disquieting and frightening the darkness and the quaking may be, we are sure that

"God's in His Heaven—all's right with the world,"

and if the close of the year now ended has been the most cataclysmic of all the centuries, the course of the coming year will witness the dawn of the Golden Age, for which all the past was made.

The older order was bound to pass away. It is, indeed, toward this that everything has been looking and moving through all the centuries. It hardly could pass—such a settled and deep-rooted order of society—without convulsion; without shock to nations and institutions and the sufferings of men and women and children. "Wo to them that are with child, and that give suck, in those days!" Our hearts are sore for the stricken millions. Let us help them to the utmost; let us not harden our hearts with any specious sophistry about prolonging the war by our gifts. And we cannot help being shaken a little by the crash of worlds all around us. In a sense, it is more terrible at a distance, as a spectacle, than it is in the very midst of the turmoil, as an experience. And, yet, as Edward Markham sings:

In spite of all the ruin and the wrong,
Deep in my heart I hear a secret song—

the song of the New Era, the Golden Age, the El Dorado, which is to be born out of the present cataclysm—which is at this moment in the agony of birth.

This is why we are to wish one another a Happy New Year at this time with more than ordinary earnestness and significance. Not with the light, perfunctory greeting of other years, but with the deep and solemn joy of those who went around, twenty centuries ago, saying, as they met each other on the streets, "The Lord is risen indeed." For, this year is to be the greatest of all years since the birth of Jesus, the Christ. The coming days are big with unimagined wonders. I, for one, am profoundly glad that I am to see its stupendous unfolding. I wish you a Happy New Year, brother. I feel, as you do, the "touch of mortal blight" that seems to grip the earth,

"And, yet, the ramparts of my heart are strong,
And in my heart sounds on the eternal song."

A HAPPY NEW YEAR!

Was he not kind to you, this dead old year?
Did he not give enough of earthly store?
Enough of love, and laughter, and good cheer?
It is not well to hate him for the pain
He brought you, and the sorrows manifold.
To pardon him these hurts still I am fain,
For in the panting period of his reign
He brought me new wounds, but he healed the old.
—Paul Lawrence Dunbar.

"LET'S ALL BOOST"

We are hitting the line hard these days—we have to do it. There is war in America as well as in Europe—though we are fighting our battles with dollars instead of with bullets. Anyhow, we need the ammunition, so that we can keep on trying to make CLINICAL MEDICINE the biggest, best, most helpful, most enthusiastic medical magazine published for the general practitioner.

The ammunition is subscriptions, and *we want yours*. If you are not a regular reader, and if you like this number, you are respectfully invited to join our big family. If you are one of our old friends *please renew promptly*. And—won't you get into the recruiting service? Our big ambition is to add five thousand new subscribers in the next three months. We can do it if you will help. Let's all boost!

BREAD, AND THE COLON-BACILLUS

Some startling statistics—filling the mind with abhorrence—have been made public, through its weekly *Bulletin*, by the New York Health Department. These investigations, conducted in the city's research-laboratory, were directed toward determining the contamination of the various kinds of bread as sold in the local markets; and the results disclosed are truly disgusting.

That, on the whole, people are not as cleanly and sanitary in their habits as they should be is well understood, of course, by those more sensitive and particular, but the frequently actually dangerous consequences of their slovenliness, or worse, is less generally realized.

In the matter of the handling of our edibles, just consider how that is being done; just open your eyes to the fact that our foods, in the process of preparing and vending,

are exposed to all the dirt and filth of the environment as well as to the attacks of prowling vermin, while the venders (and all too often the customers) manipulate the articles with unspeakably dirty hands that are not washed the long day through, and but imperfectly in the morning. Indeed, it is not at all uncommon for grocers and butchers to attend alternately to the horse and stable and between times wait upon customers, merely wiping hands against their filth-laden "pants"; in truth, this writer has seen them thus "clean" their hands after wiping away a thick-oozing gonorrheal discharge, against which a similar trimming of a purulent catarrhal proboscis hardly deserves mentioning.

However, although women generally are more fastidious, there is more sinning of this nature in the kitchens than is believed, the apron and the calico skirt having much to answer for; as to washing—cleansing—their hands frequently, and, in particular, after intimate contact with the usually unexposed portions of the body, many never think of it; preparing meals and manipulating baby will alternate in cheerful sequence.

In view of these undisputably deplorable conditions, the figures given out by the Health Commissioner can not astonish an observant person, although they should lead to a more vigorous crusade in behalf of public no less than private personal cleanliness and sanitary precautions. The present tests were rather limited in number, but they go to confirm similar ones previously conducted by others; they also demonstrate the great superiority of machine-handled and wrapped bread over the ordinary kind.

The outstanding feature, against which this protest is aimed, is, the prevailing presence of the colon-bacillus—upon the real significance of which we surely will not need to dwell here; for, the imagination refuses to follow. These, briefly, are the findings:

Bread which had not been touched by human hands, after careful unwrapping was distributed among different classes of people to handle; these being, respectively, clerks, dishwashers, and stablemen. In these samples, the colon-bacillus was proven to be absent. However, after these specimens had been manipulated as mentioned and then used for producing cultures under proper precautions, the colon-bacillus was found in every one of them.

In another series, unwrapped loaves of bread were purchased in stores, some of the bread kept in cases, some displayed on the counter. Of these samples, 66 percent were contaminated with the abhorrent bacillus coli—a microbe derived from human excrement alone. Furthermore, the labels were taken from two other loaves and subjected to bacteriologic treatment, and this witness to people's inexcusable uncleanliness and filthy habits, here also was discovered.

In this connection, the *Bulletin* mentioned reminds us of similar findings by the United States Department of Agriculture, as published in *The American Journal of Public Health* for September last; namely, that 62 percent of unwrapped bread was contaminated with bacilli of the colon group, while of the bakery-wrapped bread only 7 percent showed its presence.

The one plain duty of every man is to face the future as he faces the present, regardless of what it may have in store for him, and, turning toward the light, as he sees the light, to play his part manfully as a man among men.

—Theodore Roosevelt.

THE PERSONAL EQUATION

Seeking to eliminate the chances that come from the ignorance and deceit of our fellow citizens, we have made gigantic strides along the path of government control and supervision of utilities. The government stamp is demanded on our drugs, our foods, our doctors; and on how much more none may tell. But, with all our pains, we have not arrived—and we never shall arrive—at the point where we may dispense with personal care and discrimination. The rule of *caveat emptor* never will be abrogated.

In a publication sent out by a chemical manufacturing house, we read this significant item: "We reject annually many lots of defective and spurious aconite, employing only the *select* of the market." We are safe in asserting that every manufacturer, every wholesaler, jobber, retailer makes the same claim of select excellence for his products. But—what becomes of these rejected lots? Who gets them? Who shoulders their loss, destroys them, gets them out of the market? What is to hinder the owner who has been "stuck" with a bad lot of roots getting them powdered and selling them in this unrecognizable form?

Undoubtedly there are firms that prize their standing too highly to let any inferior goods go out of their places knowingly; but have they never a dishonest or careless employe? And are there no men in the drug trade who are not averse to buying a cheap job lot and selling it at a high profit, if they

can find the "sucker" to take it off their hands as good goods?

Bosh! And thrice again, bosh! There is no monopoly of honesty and efficiency in the drug trade; and there is nothing in dealing in drugs that purifies the human heart of wickedness or greed. Until the millennium dawns, the doctor must scrutinize his drugs himself and trust nobody else. He must know for himself; and he must learn to know which supply houses really try to keep up their quality, and which are in business for all they can make out of him.

Just what is meant when a house guarantees the quality and accuracy of its products?

There was a firm once that dealt in a certain article—the expressed juice of a berry. The concern charged the top price for it, gave the minimum quantity, and would not replace it when it had decomposed before the bottle had been opened. The house is out of business—at least we have not seen it among the advertisers for years. Did it make a fortune and quit, or was it dropped by a disgusted profession? Probably it died, because it was cheaper than living on free lunches.

As a rule we like the man who thinks it is going to clear up better than we do the one who is sure it has set in for a long rainy spell.—Nixon Waterman.

THE ACONITINE INDICATIONS

One of the most significant illustrations of the differences between the cruder drug preparations and their active principles is furnished by aconite. This drug is acknowledged to be one of the most powerful agents in the materia medica. Its powers are developed rapidly and, in lethal doses, it overcomes the vital principle with appalling force.

Aconite enjoys the advantage of having been studied with unusual care, and its field of activity has been determined with scientific accuracy. Moreover, the uses to which aconite has been put in practice are exactly covered by its principal alkaloid, aconitine. The other two active principles, aconine and napelline, exist in too small proportions and potencies to modify seriously the effects of the aconitine. There is not a use to which aconite has been put that is not fully supplied by the alkaloid.

I doubt if any plant drug presents a greater variability of strength in its galenic preparations. Examinations of many samples of aconite tincture—the most popular form—showed no two to be of nearly the same strength, and the diversity to vary over a scale of more than 16 to 1. With ordinary drugs the physician may worry along with such uncertainties, trying out each new sample and, after its quality has been determined, administering it in doses sufficient to induce the desired effects.

This will not do with aconite; its toxic action is too powerful and too swiftly developed, while the febrile conditions in which its powers are most valuable require prompt and effective application in the earliest stages, before the pathologic processes have progressed to the infliction of material lesions.

For these reasons it is of prime importance that the preparation of monkshood to be employed should be so certain, uniform, and unchangeable that the clinician should know precisely how strong a dose he is giving.

Take an opening inflammation, in the stage of hyperemia; we have a very few hours in which to act, before the engorged capillaries give way, and extravasations occur. If in this time we succeed in relaxing the spasmodic contraction of the systemic capillaries and lessening the force of the heart in thrusting more blood into the affected area, the hyperemia subsides as the blood drains out, and the subsequent stages of the inflammation do not follow—the attack is jugulated. But if we must spend these precious moments trying to determine the strength of our drug, the opportunity is lost.

Naturally, the user of the tincture is apt to deny the possibility of aborting a febrile attack, while the doctor who is accustomed to aconitine knows jugulation is a possibility. Just so, the surgeon of the Civil War considered union of wounds by first intention so rare and unlikely as to be not worth trying for; and now we expect such unions, as a matter of course.

Another significant phenomenon: Every doctor who employs the tincture is somewhat afraid of aconite, and considers aconitine too dangerous for use as a medicine; while those who are accustomed to aconitine lose all fear of it, and even recommend it as especially suitable for children on account of its safety and mildness of action.

Take a granule containing 1-800 grain of aconitine, let it dissolve on the tongue, and in less than one minute the characteristic numbness will have developed. This quickness of action is a notable phenomenon with all vasorelaxants, the facilitation of the circulation carrying the drug rapidly through the vessels to the point where its activity is exerted. Quick action is needed for quick

affections. To acute maladies we oppose remedies speedy and powerful; to chronic diseases we apply agencies slowly developing their influence but more enduring. The problem of removing debris, repairing damage and restoring healthy function is a very different one from dissipating at the outset a threatening hemic afflux.

The therapeutic applications of aconitine are innumerable, but they are all built upon its power of relaxing vascular tension and stimulating cardiac inhibition. Even the relief of painful affections like neuralgias depends upon this, for by dilating the cutaneous capillaries the blood is permitted to flow into them and the engorgement of the aching nerve centers is allayed.

The local anesthetic power of aconitine is not utilized, as we have less potent agents that fulfil that duty satisfactorily. However, this symptom is an invaluable indication of beginning toxic action, showing that the time has arrived to discontinue the remedy. Although to those who are accustomed to employ aconitine daily and hourly in practice, the drug is never dangerous, yet it is not to be applied carelessly. Here is where the admirable system of small and rapidly repeated doses comes in so aptly.

To a lady, aged 35, full-blooded and stout, we gave three granules of aconitine, veratrine and digitalin, at one dose. Shortly afterward she spoke of the characteristic aconite numbness, generally diffused over her body. No treatment whatever was required, but thereafter she was given these granules but one at a time, repeated every half-hour until the pulse showed relaxation. This lady seemed unusually susceptible to some drugs, for once before she was idodized by one five-drop dose of syrup of iodide of iron.

Withal, safety and efficiency are best secured by administering aconitine in small and repeated doses nicely gauged to induce the effect desired.

Thy friend has a friend, and thy friend's friend has a friend; be discreet.—The Talmud.

PROPHYLAXIS OF "COLDS"

In our enthusiasm over the biologic aspects of disease which have engrossed the attention of the profession during the last decade, we are perhaps prone to overlook too completely the other factors which unquestionably play an important part in the etiology and pathology of infectious conditions. Especially does this seem to be the case in regard to those diseases in which the demonstration of the biologic factor has entirely revolutionized our theories and conception of their nature and cause; diseases which we had never suspected of having any infectious morbidity. By a sort of process of reaction, we have caught eagerly at the new explanation, to the utter ignoring of the old, forgetting that clinical facts, as I have pointed out in another editorial, are not to be overthrown by bacteriology, but only to be elucidated.

Thus in the matter of "colds," for example. For years we accepted, without question, the congestive theory of catching cold. It was generally conceded that the action of hot and cold air upon the vasomotor mechanism of the skin and mucous membranes brought about a disturbance of the circulatory balance which resulted in a catarrhal inflammation of these tissues, giving rise to rhinitis and other forms of catarrh. Then, all of a sudden, as it were, the microscope and the culture tube were held up to our astonished eyes, and we saw clearly, for the first time, that the pneumococcus, and the streptococcus, and the influenza bacillus, and the rest of the microbic family of the nose and mouth were at the bottom of the trouble.

In the glow of our new-found knowledge, we laughed a little foolishly at our former notions about taking cold, and then we went to the other extreme. Taking cold was not "taking" cold at all; it was acquiring an infection. Exposure to weather had no more to do with it than it had to do with getting the measles. All our fondly cherished precautions, directed to the care and protection of the skin and the nasal passages against temperature changes, were a delusion. The only adequate and effective prophylaxis lay in biologic immunity, through blood resistance and opsonic stimulation.

This side we ought to have considered, yet not have left the other side unconsidered. As a matter of fact, of course, the intervention of the bacteriological factor did not alter the validity of the vasomotor factor; for the role of the vasomotor mechanism in the production of the cold was an established, clinical fact; and, I repeat once again, bacteriology cannot and does not alter clinical facts. By all means let us replace the word "cold," and the morbid entity which it used to convey, by the word "infection," with all that the latter term implies. By all means let us recognize and avail ourselves of the other side which bacteriology has opened up to us. But, cold or infection or whatever it be, we cannot, and we should not, get away from

the clinical fact, established by years of occurrence and observation, that exposure to vasomotor disturbances does precipitate the disease.

Dr. John C. Rommel, in a communication to *The Medical World*, calls us back in timely fashion to this sensible viewpoint, and makes a strong plea for a more systematic play-up of the vasomotor element in the prophylaxis of colds. Nor does he stop at merely calling attention to the subject, but, like a good constructive critic, he propounds a practical method of applying the principle for which he contends. He urges a rational and systematic practice of "hardening" the skins of those persons who exhibit a special susceptibility to changes of temperature by means of treatment with cold water, cold air, and the wearing of lighter clothing, particularly the discarding of woolen underwear which, as he points out, irritates the skin and keeps it in a continued state of relaxation. All of which is trite enough, to be sure—nothing new about it; but it is none the less scientific, and well worth calling to our attention at this time.

There will be found in many cases, I fear, an unfortunate obstacle to the carrying out of Doctor Rommel's plan, namely, that the very people for whom such a hardening process is most needed are, as a rule, the people in whom it cannot be accomplished, who are inherently defective in vasomotor capacity and quite incapable of responding to stimulation. However, there is still a sufficient number of individuals in whom vasomotor deficiency is largely a matter of habit, and re-education quite practicable; and for these the system of treatment proposed by the doctor offers a scheme of immunization equally scientific and equally effective with those which look to the biologic defenses. This, after all, is the prime significance of Doctor Rommel's preachment.

THE HARRISON ANTINARCOTIC BILL

The federal antinarcotic bill, as finally revised by the Conference Committee, passed the United States Senate on December 10. It will undoubtedly be signed by President Wilson before this number of CLINICAL MEDICINE reaches its readers, and becomes effective upon March 1 next.

In the February number of CLINICAL MEDICINE we shall print a digest of the bill and give all information regarding its details necessary for the guidance of physicians and others interested.

P. S. The bill was signed by President Wilson on December 21, and is now a law.

Let kindle, as before, O Heavenly Light!
New messengers of righteousness, and hope,
And courage, for our day! So shall the world,
That ever, surely, climbs to thy desire,
Grow swifter toward thy purpose and intent.
—Richard Watson Gilder.

CONCERNING DUM-DUMS

In times of war it does not take very much to stir up between the belligerent peoples (especially among those who do not take an active part in the fighting but rather stay at home and feed their nerves with sensational "news" from the front), charges and countercharges of atrocities and violations of the civilized code. Not infrequently this susceptibility to sensationalism on the part of the non-combatants is deliberately played upon by the powers that be for the purpose of arousing sentiment in favor of one belligerent at the expense of another.

Thus it is not at all surprising that between the nations now at war in Europe there should have appeared that perennial subject of accusation and reproach, the dum-dum bullet, tabooed several years ago as an agent of modern warfare, and stalking, like Bancho's ghost, at every subsequent orgy of steel and powder. It is still less surprising that the dum-dum agitation should be encouraged and fomented among those of the belligerent peoples who, as we have said, feed their passions on just such sensational rumors.

But by us, as a neutral, disinterested people, and especially by those of us who purport to be dispassionate scientists, such reports ought to be received and swallowed with a grain of salt, particularly when we consider the lack of any specific evidence in the case and the wide latitude of facts concerning bullet wounds in general and dum-dum wounds in particular. Most of the erroneous impressions which prevail on the subject in this country are due to a misunderstanding, or a lack of knowledge, as to just what a dum-dum bullet really is.

"The dum-dum bullet," says Surgeon-General W. F. Stevenson of the British Army in *The British Medical Journal*, "is precisely similar to the Lee-Enfield bullet, except that the copper-nickel envelope ends near the shoulder about three-eighths of an inch from the point, leaving the leaden core exposed for that distance. Other forms of this class of missile have a hollow, or dimple, in

the fore-end, which is uncovered by the envelope, or cross-cuts made with a saw in the direction of the long axis of the bullet; but in all of them the same object is sought, namely, that they should break up on contact with, or at least on striking, bone."

From this description, it will be seen that there is nothing so definitely distinctive about a dum-dum bullet that it cannot be very easily simulated by an ordinary service bullet in its effect and in its appearance after it has spent itself, and, as the Surgeon-General says, "the mere finding of bullets broken into numerous fragments in wounds is no proof that the dum-dum type of missile is being used by the enemy, for the ordinary service bullet sometimes parts with its envelope which may be torn into jagged and twisted strips of metal, while the leaden core is broken into slug-like pieces, with the result that the destructive effect on the soft parts of the limbs is greatly increased."

The only real evidence of the use of the dum-dum is the finding of bullets of this kind in positions recently evacuated by the enemy, and even then, as will be seen from the description given by the writer, it is not at all impossible that ordinary service bullets have been treated by the men themselves so as to resemble the dum-dum type.

As to the evidence of the wounds made by such bullets, the British Surgeon-General very pertinently points out that "ordinary service bullets are capable of causing more severe wounds in the limbs when they traverse compact bones at high rates of velocity." The jagged and shattered nature of the wound is in all cases due to the so-called explosive effect of the bullet; and it is quite a mistake to imagine that this explosive action is confined to dum-dum bullets. Our own Colonel Lagarde, in his excellent and authoritative work on "Gunshot Wounds," speaks instructively on this point.

"The term 'explosive effects,'" he says, "is in a measure misleading, because it conveys the impression that the wound is the result of an explosion or an explosive bullet. The term is entirely descriptive, and owes its origin to the similarity in the appearance of a wound caused by an explosive ball, *per se*, as compared to a bullet having sufficient velocity and energy to show a corresponding lesion when a proper impact is made, as for instance against resistant bone. As a rule, the entrance wound presents no special features. The exit wound is large and lacerated, with the appearance of an explosion having occurred from within. Torn muscles, tendons, and at times lacerated nerves, project from the injured part, mingled with pieces of bone. The channel from the wound of exit is funnel-shaped, with the base at the exit and the apex at the seat of fracture."

It is clear, therefore, that neither the appearance of the bullets found in the wounds, nor the character of the wounds, themselves, furnish any trustworthy evidence of the use of dum-dum bullets, nor even of the use of bullets resembling the dum-dum type. And even the discovery, here and there, of unused bullets of the dum-dum type does not by any means conclusively point to the systematic use of the dum-dum, since, as we have pointed out, the features of the dum-dum are easily imitated in the ordinary service bullet. A dispassionate and disinterested view of the matter should lead us to the very sane and sensible conclusion reached by the British Surgeon-General himself, namely, that "the recognized customs of war and all ideas of humanity are against the deliberate use of projectiles of this kind among civilized nations, and it is improbable that they are being used to any great extent."

If I stoop
Into a tremendous sea of cloud,
It is but for a time; I press God's lamp
Close to my breast; its splendor, soon or late,
Will pierce the gloom; I shall emerge one day.

—Robert Browning.

WE WANT YOUR OPINION—THIS IS IMPORTANT

For some time, pharmaceutical journals and pharmaceutical societies have been advocating the enactment of laws requiring every physician who dispenses his own medicine to hand to his patients prescriptions for the drugs dispensed. The reason given for advocating such legislation is, the possibility of danger to the patient through the carelessness or ignorance of the attending physician. The underlying reason, however, is undoubtedly the desire on the part of the druggist to strike a body blow at dispensing by doctors.

During the present winter, forty-four state legislatures are or will be in session. It is probable that numerous bills will be introduced, affecting the interests of the medical profession, and we have good reason to believe that among them will be many of the character described above. In order to get an expression of opinion from the medical profession as to how they would view such anti-dispensing legislation, it has been suggested

to us by a very prominent pharmacist that we should conduct a symposium upon this subject. We therefore ask herewith every reader of CLINICAL MEDICINE to write us briefly for publication his attitude regarding a law which would require every physician dispensing medicine in person, to write a prescription for this medicine, such prescription to be placed in the hands of his patient.

This is an exceedingly important matter, and we hope that a great many physicians will write us. We want to know exactly how the members of the medical profession feel. It will be understood, of course, that such a law would affect those who ordinarily prescribe as well as those who habitually dispense, since practically every physician dispenses more or less of the emergency remedies, such as morphine, atropine, cocaine, strychnine, digitalis, chloral, acetanilid, and other powerful drugs, against whose perils our druggist friends allege their desire to protect the people of this country. Please write us promptly and write us frankly. We want to hear from all sides.

Come right to the point. Present your case, plead your cause, and do it quickly. Better ten short, pointed, practical articles than one long and attenuated one in which the moral or the helpfulness is lost in a maze of words.

KEEP AN EYE ON THE LEGISLATURE

Most physicians in active practice allow themselves to become absorbed in their work. The momentous problems of life and death with which they are concerned are so stupendous that they concentrate upon them every particle of brain power they possess; and they grow impatient at being called upon to give attention to anything else.

Truly, there is nothing so fascinating, nothing so much worth while as this duty of tracing the paths of disease and of opposing to it a satisfactory treatment. No matter how gigantic a man's intellect, even the doctor's, he may well believe that all his gray matter is needed to do his professional work justice.

Distracting him from his engrossing duties, comes the call of his family for means—for "dollars." Wife and children get to represent to him so many hands stretched out to be filled. No nestful of young birdlings ever presented a finer display of eternally open, gaping mouths than is shown by the doctor's family. Poor things! How can they realize that Johnny's boots or Bertha's graduating gown seem of little moment to the father, who is striving desperately to keep the breath of life in little patients, stricken with diphtheria, scarlet-fever, typhoid fever or pneumonia—to the man whose brain is drained of vitality by attendance upon maternity cases, and whose rarely indulged night in bed is disturbed by demands to relieve asthma or to struggle with croup?

Yes, papa will try to collect the needed sum; and he even makes out a list of debtors to whom he will apply on the morrow. But just as he is starting out comes a messenger to tell of a man crushed by a falling tree—and collections go over indefinitely.

Fill the bottle with pebbles—the doctor's work—and it is full. Filter into the interspaces sand—collecting—and, yet, the bottle is only full. Room still for water—but where does the doctor's day show leisure for attention to medical politics, society meetings, and time to be given to the legislation that threatens to tie up his means of livelihood through restrictions and regulations that hamper him unreasonably?

The prime difficulty is, that our work is one that does not admit of business methods, either in finance or in the domain of thought. We can not toss a letter to the stenographer and say, "Tell him, No!" We must carry our problems about with us, slowly cogitating them, and take time to search through books, notes, and journals; gradually formulating our conceptions, but none the less ready to desert them and adopt others as the case develops. We are likely to have quite a number of these problems under solution at the same time, and each of them changes and shifts from day to day.

Each of us is like a general beset with enemies, every one of whom is doing something different each day. Some may advance over night, others retreat—while as to some we do not know where they are or what they are about—we must forever surmise, infer, foresee, depend upon intuition or just plain guess.

Well, it's lucky for us that we have journals to keep a sharp eye on the legislatures and to warn us of every snaky move and sly proposition brought up, designed to hem us in and to filch our few privileges and our lean purses. As long as our true medical journals warn us we can put in a word or a letter that will enlighten our well-meaning but not omniscient representatives, and thus prevent the affair going by default. But does not that make it all the more imperative that the doctor should back up his loyal journals actively in the fight? Unless the general practitioner

does this, unless he does give the friendly press his enthusiastic support, our enemies surely will win out while we—*shall be out!*

Tell a miser he's rich, and a woman she's old, and you'll get no money of one nor kindness of t'other.

—Benjamin Franklin.

AS TO MORAL DETERIORATION OF DOCTORS

There is entirely too much talk of the medical profession's moral deterioration. We hear of surgeons operating upon their confiding patients solely that the cutter may collect big fees for needless work; of the family physician devising such interferences and pocketing half the surgeon's fees; and of spinning out maladies, that the number of visits may be increased. Darker stories are hinted—of deliberate infection of the bladder, to start a lifelong cystitis to be treated, for instance, and similar "over-true tales."

Most of these allegations are lies. Many originate as intended jokes, and the perpetrators never expect to be taken seriously. These are like the "jokes" put out by a Scandinavian wag, anent the cabbage-worm and the artificial honeycomb—stories which the originator looked on as jokes, but which proved disastrous to two flourishing industries and brought incalculable losses on many innocent persons.

Although there may really have occurred an occasional rascality like those mentioned, it can not have been more than exceptional at the worst. At the best, the heart of the profession is sound; and, as a body, physicians deserve all the confidence they have ever received from the people. That we do not hear of their good deeds, is because they are taken as a matter of course—and we do not go about the streets with brass-bands, crying our merits like hucksters. Still, sometimes an instance crops up that deserves to be recognized and made public. Here is one out of many:

Bennett Medical College (Chicago) was requested to investigate the merits of the Duket cure for tuberculosis. The cure was backed by powerful influences and money. A hospital with fifty beds was purchased, a laboratory established and generously fitted, a staff chosen from the faculty and placed on liberal salaries, and a clinic opened. Financial support without limit was tendered, and the college was requested to investigate the cure scientifically and report upon its merits. If it proved a cure for the dread disease, from which every household in the land has to mourn a victim, the world would be indebted to the college and its backers. If the Duket cure did not prove worthy, the investigation was to be extended to the Friedmann method or any other that appeared sufficiently plausible to warrant the test.

Powerful influences backed Duket; the material advantages of the endowment to the college were great; and there was every reason (speaking from the standpoint of the material interests of the institution) why it should favor the cure or find excuses to continue the work. But after a very thorough investigation the college found the Duket cure worthless, and neither the Friedmann nor any other method in sight sufficiently well grounded to merit investigation.

The laboratory and clinical staff told the truth, and so cut off its own lucrative income thereby. Yet, should this statement see the light, we are quite sure that, instead of being pleased with the laurels we proffer, these gentlemen will be inclined to be affronted that anybody should have suggested the possibility of their doing aught else. And, since in this we heartily agree with them and firmly believe that more than ninety-five percent of the medical profession would have done exactly the same thing, we tender our apologies.

Graft is news; honesty is an old story.

THE "TWILIGHT SLEEP" AGAIN

The matter of the twilight sleep appears to be passing into another stage in this country, as a result of the recent agitation on the subject—the stage of adoption. Several of the hospitals of the larger cities, notably those of New York, are making use of it in their obstetrical work. Bellevue Hospital is trying it out in their lying-in wards. But the most systematic and adequate follow-up of the method has been made by the Jewish Maternity Hospital of New York. (Rather remarkable, but altogether creditable to their breadth of mind, that the Jewish race should be most active in cancelling the Judaic curse upon the bringing forth of children.) In this institution the twilight sleep has been subjected to a careful experimentation and a rigid observation for a period of three months, the result of which has been to convince the board of the validity of the claims made for it.

The cases experimented upon by the Jewish Maternity Hospital were taken from all classes of patients. The report shows that

there have been no complications and no untoward symptoms in any case, and that the percentages of cases in which it was found necessary to resort to artificial aid in delivery was much lower among those who took the twilight sleep than among those who did not. The experience of the Jewish hospital also shows, as we have over and over again pointed out, that success in the method is dependent upon careful attention to technic, the principal danger being again demonstrated to be the possibility of excessive doses of morphine.

We feel gratified, of course, at this evidence of the growing adoption of hyoscine and morphine anesthesia in the high places of medicine. We have reason to be gratified; for we take credit to ourselves for having actively introduced this method in this country, and promoted its use in the face of unaccountable opposition. We welcome its employment by hospitals everywhere; but we cannot refrain from repeating once more, as we have repeated over and over before, that there is no reason for confining its use to these institutions. There is, in fact, no reason in the world why the physician, with the same care and attention to detail, cannot give the twilight sleep successfully in the homes of his patients; on the contrary, as there are countless reasons why it is not convenient or desirable for every woman to go to a hospital for her confinement, there are just that many reasons in favor of the home administration of the twilight sleep.

The pessimist who goes about wishing he had never been born is not the only one who regrets it.

—Nixon Waterman.

IS EMETINE OF VALUE IN ARTHRITIS?

There seems to me nothing in drugdom that has been more fascinating than the development of emetine therapy during the last two years. We know now that this drug is specific in dysentery, more than probably specific in pyorrhea, and remarkably effective in controlling hemorrhage of varied type. Now comes still another suggestion for its application.

In a recent number of *The Journal of the American Medical Association*, Smith, Middleton, and Barrett announce the discovery of the *entamoeba buccalis* (the organism causing pyorrhea) in the tonsillar crypts of a number of persons affected with chronic tonsillitis, associated with arthritic and other systemic complications. In at least two of these cases the emetine was administered hypodermatically, as in the treatment of pyorrhea. As a consequence, there was an immediate and striking amelioration of the rheumatic symptoms.

The question instantly arises as to whether it may not be possible to cure, or at least greatly to relieve, many of the chronic forms of arthritis now known to depend upon mouth infection. Even arthritis deformans may, possibly, be benefited by the administration of this alkaloid. Certainly we shall try this remedy in the very next case of arthritis, acute or chronic, coming to our attention, in which an examination of the mouth shows the presence either of pyorrhea or of chronic tonsillar disease. We hope that many other physicians will also try the remedy in cases of this kind, and let us know whether benefit follows its use or not.

It is all very well to be constantly seeking to add to your store of knowledge—to do this is a sign of good judgment and foresight; but it is of even greater importance to impart to others what you have learned—for this is a duty.

DR. ROBERT GRAY'S AUTOBIOGRAPHY

We have just received from Dr. Robert Gray, of Pichucalco, Mexico—a man who is known to every one of the older readers of CLINICAL MEDICINE, and beloved by all—the manuscript of his autobiography. A portion of this, at least, will be published in this journal, beginning next month; while we hope to see, eventually, the complete autobiography in book form.

The record of Doctor Gray's life is one of the most interesting and remarkable we have ever seen. He was born in the southern portion of the United States, spent his boyhood on a large plantation in a slave-holding community, went to Paris for his medical education when he was a youth of twenty-one, served as a soldier and surgeon in the Confederate army during our Civil War, and soon after the close of the war went to reside in Mexico; and here, buried in the tropical forests of the Isthmus of Tehuantepec, remote from railroads, cities, and intimate association with his fellow countrymen, he has been practicing his profession ever since.

In spite of this prolonged and complete isolation, Doctor Gray has exerted a marked influence upon medical practice in the United States no less than in Mexico. Now, at the advanced age of eighty-five, his mind is as active as ever and his body apparently more

resistant to fatigue than that of many a man of fifty years. He attends to a large practice, extending over an area measuring 40 miles from one end to the other, making his visits on the back of a horse or a mule. Even now he is likely to being called out, as he recently wrote me, "at any hour in the twenty-four."

Doctor Gray's life has been, and is even now, a romance. Told in his quaint yet virile style, it makes a story far more fascinating than many a work of fiction. You will want to read it all.

And so, if I have wrought,
Amassed, or conceived aught
Of beauty, or intelligence, or power,
It is not mine to hoard;
It stands there to afford
Its generous service, simply, as a flower.
—Bliss Carmen.

WE SHOULD USE MORE LOBELINE

The other day I had a most interesting interview with that good friend of every reader of CLINICAL MEDICINE, Dr. Finley Ellingwood. He dropped in to see me, and in the course of our talk he launched forthwith into most enthusiastic praise of that well-known but neglected vegetable remedy lobelia.

Doctor Ellingwood considers lobelia one of the most remarkable remedies in the materia medica, and he asked me point-blank why we did not have more to say in the columns of the CLINIC about lobeline sulphate. He not only considers lobelia (also lobeline) a powerful and safe antispasmodic, but really a "vegetable antitoxin"—a designation applied to it some years ago by Dr. E. Jentzsch of this city.

This carries us back to 1908. In that year Doctor Jentzsch read before the Illinois Eclectic Medical Association a paper upon the use of lobelia in the treatment of diphtheria, which was published in this journal.

His first experience was with his own child, who apparently was dying from diphtheria despite liberal dosage with antitoxin. As a last resort the doctor gave a hypodermic injection of lobelia, and improvement followed almost immediately. He subsequently employed this drug in many cases, and at the present time is more enthusiastic about it than ever. Doctor Jentzsch declares that "its favorable action takes place usually within ten minutes"; also that it is something more than a relaxant, or, in other words, that it has a specific action upon the course of the disease, acting veritably as a "vegetable antitoxin."

Doctor Ellingwood assures us that Doctor Jentzsch's experience has been verified by hundreds of other practitioners. He has received numerous letters from physicians who are just as enthusiastic in the praise of lobelia as is Doctor Jentzsch himself.

In July 1912, we published a letter from Dr. John H. Ferguson, of Colorado Springs, Colorado, who had become interested in lobelia through reading the articles of Doctor Jentzsch. Finding the fluid preparations of lobelia very painful when injected subcutaneously, he began the use of lobeline sulphate, and he declares that this "gives all the good effects which Doctor Jentzsch attributes to the 'specific' tincture." There is no doubt that the peculiar action of lobelia depends upon the constituent lobeline. Indeed, Doctor Ellingwood informs us that the first pharmacologic studies of lobelia were made with one of the salts of this alkaloid.

But to return to Doctor Ferguson. In the letter already referred to, he reports the treatment of 18 cases of pneumonia, in which lobeline sulphate was administered, with very gratifying results. All his patients recovered, although several of them were children, one being only ten weeks old.

Doctor Ellingwood, in discussing with us Ferguson's experience, expressed wonder that more physicians do not try lobeline sulphate in pneumonia. In this disease, he believes, it should be constantly employed. Of course, it should not be made to replace the defervescent alkaloids; but, as supplementary to these drugs, it seems to be clearly indicated, at least in a very large percentage of the cases. Wherever a relaxant is called for—wherever there is spasm from almost any cause—there lobeline should be given a faithful trial.

Speaking of lobelia, Doctor Ellingwood, in his "Materia Medica," says: "It is specific in threatened spasm, with exalted nerve action—a high degree of nerve tension with great restlessness and excitability, flushed face and contracted pupils." For instance, lobelia (also, lobeline) has been demonstrated to be of great value in the treatment of asthma, especially in the spasmodic type. In cardiac asthma, it probably would not be indicated. Ringer says that in whooping-cough lobelia "is useful in the spasmodic stage and in two or three days generally reduces by one-half the frequency of the attacks, lessening their severity at the same time." He also praises it in the treatment of croup and laryngismus

stridulus. Ellingwood says that it has been exceedingly popular as a relaxant in rigid os uteri. In this condition, it might be tried alone or in combination with caulophylloid.

Similarly, lobeline is also worth trying (given hypodermatically) in the treatment of hepatic colic, in association with other relaxants, such as atropine and glonoin, although in severe colics of this character resort to more powerful anodynes probably will be necessary.

Do not get the impression from anything we have written that lobeline sulphate or any other lobelia preparation should be employed to replace antitoxin in the treatment of diphtheria. No matter how enthusiastic our Eclectic friends may be in its praise, nothing should take the place of the diphtheria antitoxin in this disease. Yet, in severe cases—yes, in all cases—it may well be given to supplement the specific treatment.

Lobeline certainly ought to be employed much more generally in the treatment of pneumonia as well as in numerous other spasmodic affections to which we have referred—whooping-cough, for instance, in which, in association with calcium sulphide, it ought to provide an almost ideal method of treatment. It might well be given in connection with other agents in the treatment of croup from whatever cause; indeed, the resourceful physician will find many, very many occasions to resort to this important remedy, which, as we have already stated, Doctor Ellingwood considers one of the most important of the materia medica.

We hope that those of our readers who have been prescribing lobeline will report some of their cases through the columns of CLINICAL MEDICINE. We also hope that those who have not done so will give the remedy a careful trial and let us know how they like it.

Rumor is a pipe
Blown by surmises, jealousies, conjectures;
And of so easy and so plain a stop,
That the blunt monster with uncounted heads,
The still discordant, wavering Multitude,
Can play upon it.

—William Shakespeare.

THE TRIUMPHS OF MEDICINE AND SURGERY

The writer of a very clever editorial on "The Use of Drugs and the Science of Medicine" in a recent number of the Cincinnati *Lancet-Clinic* finishes his communication by asking whether we are not justified in expecting that the next fifty years will accord us triumphs in internal medicine as splendid as those of surgery during the last half century.

I venture to say that the triumphs of surgery, great as they are, are overrated if they are lauded to the disadvantage of those of internal medicine, and I assert that the latter has made quite as great progress, has recorded fully as great triumphs during the last thirty or forty years, as surgical science has.

While the advances of surgery date on the one hand from the application of anesthetics for the purpose of rendering operative interference painless, and on the other from the researches of Lister, which eventually assured aseptic technic and eliminated all the horrors of wound infection, will it be wrong to point out that surgery owes both discoveries to workers in the field of internal medicine?

Granted that the triumphs of surgery are spectacular, and almost stunning in their greatness and still more in their possibilities of the future, do not let us lose sight of the fact that the triumphs of internal medicine have made it possible for the physician to make a diagnosis of diphtheria with equanimity, conscious that he can carry his patient safely through the attack in the great majority of cases; remember also, that the incidence and the dangers of typhoid fever have diminished to a degree that was not dreamed of even twenty-five years ago; remember that internists may take the credit for having made the Isthmus of Panama habitable; that they conquered yellow fever, malaria, and syphilis, and have reduced the frequency of active tuberculosis.

To internists are due a host of achievements of benefit to thousands, where, comparatively, surgery can only benefit perhaps tens of individuals.

Let us cease worshipping at the shrine of surgery if by so doing we must decry her greater sister, medicine. I would not be misunderstood as wishing to detract from the triumphs of surgery, but I protest against this apotheosis carrying with it a comparison to the disadvantage of internal medicine, which has made greater progress in the past and is rushing onward to still greater things in the future.

Also, I believe fully that medicine is on the threshold of greater achievements than any heretofore recorded; also that there is to be a great awakening in medicinal therapy. Think of emetine!

ENEMIES ON THE FIRING LINE, BUT FRIENDS WITH THE WOUNDED

This picture was taken in the Reserve Hospital in Berlin. The patients are wounded French prisoners. A German and a French surgeon are standing together by the patient's bed, the former being the chief surgeon, the latter a prisoner, but still at his post.

The Medical Man in the Great War

WE are publishing herewith a few pictures illustrating the work of medical men in the Great War. Few of us realize how colossal are the tasks which our European brethren have been called upon to undertake. For instance, a rough computation of the number of killed, wounded, and prisoners, based upon the published reports, official and unofficial, would seem to indicate that the losses of all the armies engaged in this war must already aggregate close to 6,000,000 men.

If this computation is fairly accurate, then somewhere between 2,000,000 and 3,000,000 men must have been wounded. While the mortality in the base hospitals is very small, probably not more than 2 or 3 percent, the percentage of deaths among the wounded at the front and in the field hospitals is undoubtedly very large. (See the letter from a British medical officer printed elsewhere in this number—Miscellaneous Department.) Imagine, if you can, the immensity of the task placed upon the military surgeons and the Red Cross workers. Not only must every hospital of the warring nations be taxed to its uttermost capacity, but thousands of homes and public buildings must be used—as we know they are being used—for the care of the wounded.

The pictures shown on this and succeeding pages demonstrate the efficiency with which European physicians and nurses have risen to meet the emergency, and with what skill, conscience, and humanity they are alleviating the sufferings and restoring to life and duty the thousands who have already fallen on the bloody "fields of honor."

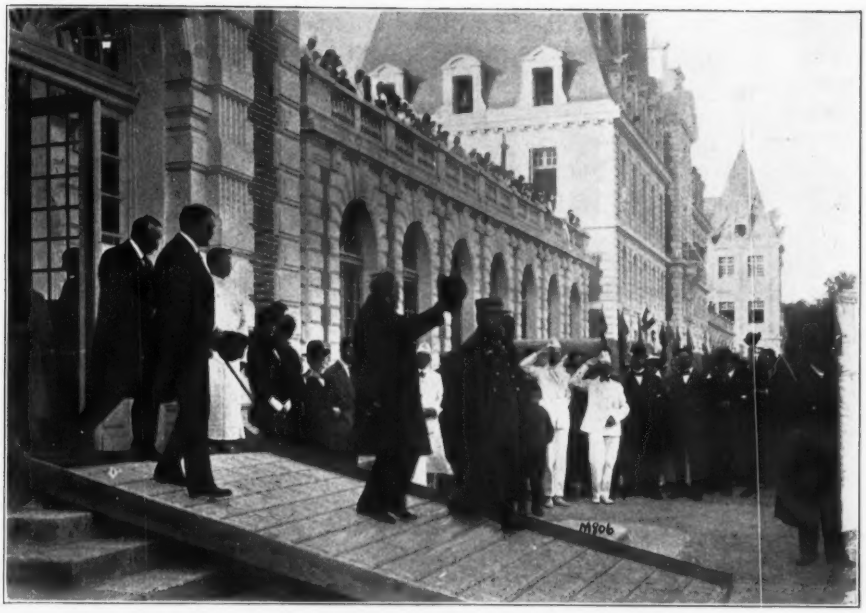
American physicians will sympathize deeply with their brethren in Europe. Where it is proper to do so we should give substantial assistance. Our own Red-Cross service is doing great work and deserves our generous support.

A BRITISH HINDU SOLDIER AT A FRENCH FIELD HOSPITAL

This picture shows how wounds are dressed at the field hospitals for the first time, in the open air. As soon as possible the wounded are sent to the rear to receive such additional care as the character of their wounds may require. This man will be able to walk.

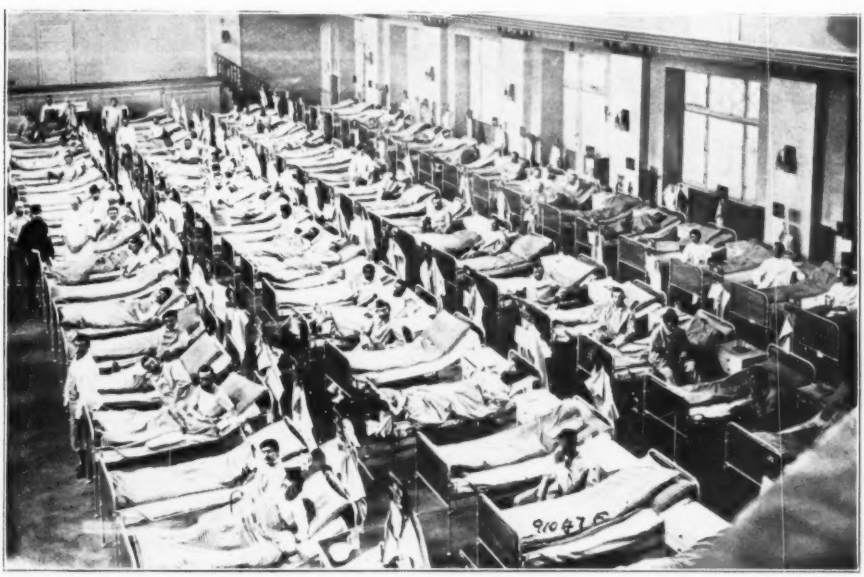
A SCENE IN A HOSPITAL TRAIN IN BELGIUM

These wounded Belgian soldiers are being taken to Antwerp for hospital care. Hospital cars, carefully fitted up for the comfortable transportation of the wounded, are being employed by all the combatants. Especially arranged motor ambulances are also much used.



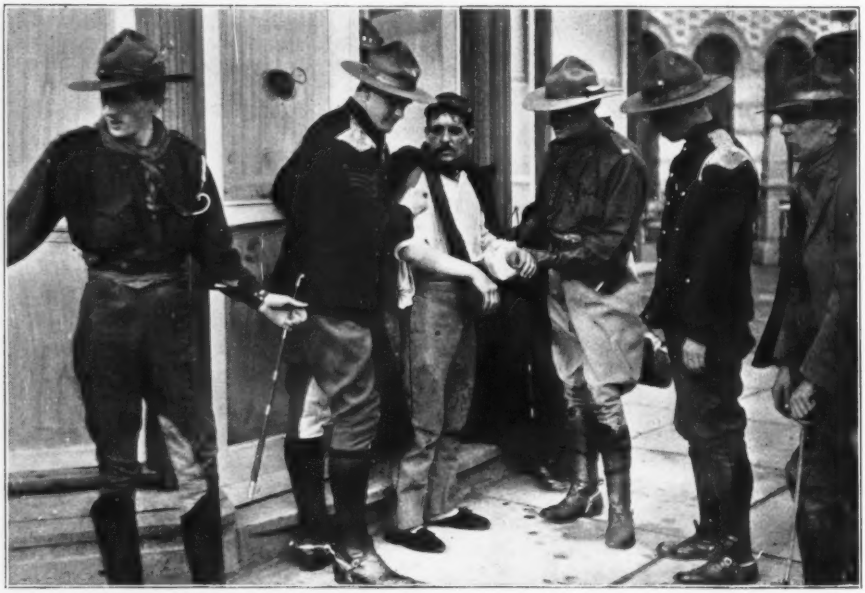
PRESIDENT POINCARÉ VISITS THE AMERICAN HOSPITAL

This beautiful building is the American Hospital in Paris which has been opened for the care of wounded soldiers. President Poincaré has just doffed his hat in acknowledgement of the cheers of the people. Ambassador Herrick is behind him, holding his hat in his hand.



GERMANS CARE FOR WOUNDED FRENCHMEN IN BERLIN

This picture gives a faint idea of the large scale on which it is necessary to care for the wounded. It also shows that the French prisoners are well taken care of. As a rule, at least, wounded soldiers receive identical care everywhere, irrespective of nationality.



THE LEGION OF FRONTIERSMEN CARES FOR BELGIAN WOUNDED

This organization is doing splendid work among the wounded in Belgium. The picture was taken, we believe, at Ostend, before that city was captured by the Germans. The great Kursaal was turned into a hospital, like so many other public and private buildings in Europe.

WOUNDED ENGLISH SOLDIER AT THE WOLVERHAMPTON HOSPITAL

Private Russell is fortunate indeed! Judging from the smile on his face and the arch glance of his nurse it isn't a half bad thing to be wounded. There are compensations even in heroism! This picture should be widely circulated in England—to encourage enlistment.

Leading Articles

The Practice of Medicine in Panama*

By Benjamin H. Frayser, Ph. G., M. D., Panama City, R. P.
The Panama Canal Service; First Lieutenant, Medical Reserve Corps, United States Army.

THE organization of the sanitary department of the Isthmian Canal Commission under Surgeon-General William C. Gorgas, as Chief Sanitary Officer, the noble work done by him and his associates, and the continuation of this work by Colonel Charles F. Mason as Chief Health Officer of the Panama Canal will, I am sure, interest those of you who have failed to visit the Canal Zone. The plan of organization is complete in every detail. The Chief Health Officer and Inspector have full charge of the medical and sanitary work, with the coöperation of the superintendents of hospitals, chiefs of clinic, district physicians and sanitary inspectors. The cities of Colon and Panama each has officers of the Medical Corps of the United States Army detailed as health officers, and in these cities a corps of quarantine officers is constantly on duty.

The Isthmian Canal Commission established hospitals at Ancon and Colon, and a sanitarium on the Island of Taboga. A leper asylum also has been established on the mainland, several miles from Ancon. The two hospitals first mentioned are divided into clinics, each presided over by a chief, and directly under each chief are the physicians having charge of sections and wards.

The Ancon Hospital

Ancon Hospital is on the Pacific side of the Zone and is beautifully situated on the northern side of Ancon Hill, which rises nearly seven hundred feet above the City of Panama. We find here thirty-six wards, the residence of the superintendent, operating pavilion, library, x-ray department, Board of Health laboratory, Superintendent's office, medical storehouse, Catholic and Protestant chapels, and the residences of the physicians and hospital employes. About one-half mile from the center of the grounds is located the insane asylum, which has three hundred inmates. In an emergency, 1 500 patients can be taken care of in Ancon Hospital.

Many of the buildings now standing were built by the French and their plan of architecture has been followed in other buildings erected on the hospital grounds since the American occupation. Each building rests on cement pillars, over two feet from the ground; is roofed with tiles and screened with copper netting. The wards are large and airy and usually contain about forty beds each. Several wards are in charge of a section physician who is assisted by the ward physicians, a section nurse and ward nurses.

The Board of Health Laboratory has as its chief Dr. Samuel Darling, whose original research work is well known to those of you who are interested in tropical medicine. Doctor Darling's staff is composed of a pathologist, bacteriologist, two chemists and four assistants. The routine stool, urine and blood examinations are made in the ward laboratories but all other laboratory work is done in the Board of Health laboratory.

The chief of the surgical clinic has full charge of the surgical department, with eight assistant surgeons, who, under his direction, operate, assist, and give anesthetics. The isolation and tuberculous wards are under the department of medicine. Each department has an officer of the week who is directly responsible for all the emergency cases admitted and for all ward calls when a ward physician is absent. One physician in each department is detailed as officer to be on constant duty for one week.

Colon Hospital and Leper Asylum

Colon Hospital is situated on the beach at Colon. This hospital is now used for emergency cases only. For a number of years the Isthmian Canal Commission operated a

*Permission to read this paper by title before the Knoxville Medical Society has been granted by Colonel Chas. F. Mason, M. C., United States Army, Chief Health Officer of the Panama Canal.

ENTRANCE TO ANCON HOSPITAL GROUNDS
Superintendent's residence second on the left

sanitarium on Taboga Island, about 15 miles from Panama City. Here, convalescent white patients were sent for one week to recuperate. While in the hospital, and at the sanitarium, patients receive free treatment and full pay, provided their stay is not more than thirty days.

Palo Seco Leper Asylum is on the mainland about twelve miles from Ancon. Its staff is composed of a superintendent, one American nurse and 14 attendants. At present four white and forty-one black lepers remain in this institution.

Every town on the Canal Zone has its district physician and sanitary inspector. The district physician has charge of the dispensary, where free treatment is given to all employes and their families; he makes all necessary calls and inspects the local hotel and commissary. In the larger towns on the Zone he has under him an assistant physician and a pharmacist. Twice daily, a hospital car is attached to the passenger trains of the Panama Railway and this runs across the Isthmus, taking to the hospital all patients who have been sent in by the different district physicians. This model hospital car is in charge of a male nurse and a negro orderly.

Nearly every nation is represented on the Isthmus by an employe, but the West Indies furnish the largest number of workmen. Only a few physicians of the hospital staff speak Spanish, it being necessary to use this language only in the Spanish sections. The patients from the West Indies are usually very ignorant, consequently accurate histories are hard to take. For instance I will give part of a conversation between a Barbadian negro and a ward physician:

"Well, what is your name? Have you got a name?"

"Yessir, I got one."

"Well, what is it?"

"George Black, sir."

"Where do you live?"

"Yessir, I think so."

"Well, where do you live; in Empire or Culebra, or where?"

"Not there, sir."

"Well, where?"

"In Jamaica, sir."

"No. Now here, where do you live on the Isthmus. Where do you get your mail?"

"Who, me?"

"Yes, you. I'm talking to you. Do you ever get any mail?"

"No, sir."

"Well, then where do you sleep?"

"I sleep at Corozal, sir."

"How old are you?"

"Yessir, about that, sir."

"When were you born?"

"I dunno, sir."

"Are you married?"
"Yessir, yessir, I'm married, sir."
"How many children have you?"
"Not too many, sir."
"Have you got more than one?"
"Yessir, yessir."
"Have you got twenty children?"
"No, sir, I think not, sir."
"Well, how many have you?"
"Not too many, sir."
"What is your wife's name?"
"Mrs. Black, sir."
"Well, I know that, but what is her other name, what do you call her?"
"My wife, sir."
"Where do you live in Jamaica?"
"In the interior, sir."
"Well, what town?"
"No town, sir."
"Do you live in the woods?"
"Yessir, dat's it, dat's de place."
"How were you injured?"
"I dunno, sir, but all at once there was a big boom, sir."
"A big boom. Well, then what?"
"I dunno, sir."
"Where were you injured?"
"I was standing up, sir, with a pick in my hand, sir."
"Well, where?"
"On the ground, sir."
"Well, where did you get hurt?"
"On my back side, sir; on the middle of my body, sir."
"Now here, I want you to tell me where you got hurt. Where were you working?"
"At Miraflores, sir."
"Did anyone see you get hurt?"
"Yessir, a colored gentleman seen me."
"Who was he? What was his name?"
"I dunno, sir."
"Who is your boss?"
"I dunno his name, sir, but he's a good man, sir."
"Sign your name to this."
"Who, me, sir?"
"Yes, you, write your name here."
"I can't write it, sir."

The "Black" and "White" signs are never displayed in stations or railway cars on the Canal Zone. Signs labeled "Silver Employes" and "Gold Employes" are familiar. Europeans and negroes are on the silver roll and are paid in Panamanian silver, while the Americans are on the gold roll and are paid in United States gold currency. Special waiting rooms and cars are provided for these two classes, consequently there is little friction.

In Panama the quartan type is rarely found, but estivoautumnal and tertian types are frequent. The cerebral form of malaria is encountered here and is fatal unless it is recognized and treated *promptly* with large quantities of quinine given intravenously or intramuscularly. In this type of the disease we usually give intravenously 22 1-2 grains of quinine, in 500 Cc. of salt solution, or the same dose, diluted 1 to 20, injected into the muscles, preferably those of the gluteal region. Repeat the dose in five hours. If this treatment is delayed until the parasites have matured, or if a double infection occurs, the prognosis is extremely grave. Over 60 percent of the deaths from malaria are due to relapse.

Dr. W. M. James, of our hospital, has found that relapses frequently follow socalled spontaneous cure, and infections treated with small doses of quinine will usually relapse.

The routine treatment of mild malarial infections is 20 grains of quinine in solution, given on admission, and 15 grains three times a day thereafter.

Royal Palms at Hospital Santo Tomas

In 1911, Doctors Deeks and James reported to the Isthmian Canal Commission their observations in 230 cases of that severe complication which is met with especially in the estivoautumnal type of malaria, e. g., hemaglobinuric fever. Exciting factors are a lowering of body resistance, and the administration of quinine seems to predispose. The treatment used at Ancon Hospital is as follows: Milk diet; normal salt solution by rectum; hot moist applications over the stomach and loins; calomel, followed by magnesium-sulphate solution. If parasites are present quinine is given hypodermatically or by rectum, and its effects carefully watched. Basham's mixture is also used, and Fowler's solution later on in the course of treatment. Tincture of chloride of iron is prescribed in 30-minim doses thrice daily, as soon as the quinine treatment is instituted.

Operating Pavilion, Hospital Santo Tomas

Tropical Dysentery

Deeks has pointed out that the term "tropical dysentery" is misleading, since it has been regarded as synonymous with amebic dysentery. He has also called attention to the following forms of dysentery encountered in Ancon Hospital. Amebic dysentery, caused by the *entamoeba histolytica* of Schaundinn; amebic dysentery, caused by the *entamoeba tetragina* of Viereck; bacillary dysentery; bilharzial and malarial dysenteries; dysentery due to tubercular ulceration of the intestine; nephritic dysentery; diphtheritic colitis; dysentery in the course of pellagra; and several other forms, including "clinical" dysentery, which has no determined etiological factor.

The form due to infection with *entamoeba histolytica* is more frequently encountered here. Deeks has employed the bismuth-milk-saline method of treatment with great success in this form of dysentery. The treatment is carried out as follows: Upon admission, the patient is given a dose of castor oil. He is then put in bed and a heaping teaspoonful of bismuth subnitrate (about 180 grains), suspended in 4 ounces of water, is administered. This dose is repeated every four hours until the stools are formed and the tongue becomes clean, when one teaspoonful is given three times daily. All through the treatment an absolute milk diet is adhered to. Plain fruit-juices may also be allowed. Saline irrigations of the lower bowel are resorted to twice daily.

We have been using emetine hydrochloride with great success. The first day the patient is given 1-3 grain every four hours; on the second day, 2-3 grain thrice daily, and, on the third, 1 grain, t. i. d. I do not hesitate to increase this quantity when I think that greater benefit will be derived from a larger dose. After all symptoms have cleared up the patient is given one ounce of castor oil. The normal diet is gradually resumed and he is allowed to get up as soon as it seems safe to do so. In extreme cases, a wide-open cecostomy has been performed, and this enables us to give free irrigation to the large intestine, while it admits of a more generous diet.

During the year 1911, 22,275 patients were admitted to Ancon Hospital; and of this number 21 had amebic dysentery, were treated, and all discharged well—able to work.

Six-day Fever

In 1912, Deeks discovered "six-day fever" on the Canal Zone. I will take the liberty of quoting from an article that he wrote on this disease. "Its chief features are: The period of incubation is apparently about ten days. The disease is highly infectious and the infectious period probably precedes the onset

of the fever, inasmuch as no cases have occurred in the hospital by contact from the patients admitted, and no precautions have been taken to avoid contact. There are no constant or characteristic prodromata. There is always an abrupt onset, with chills or chilly sensations, and an initial temperature after the chill of from 101° to 104° F. The cases have all run a course of about six days of fever, more or less continued, with but slight morning remissions, and a more or less abrupt fall. The pulse and respiratory rates remain practically normal. The spleen has always been enlarged. The blood picture remains practically unchanged. There is always some nephritic irritation as manifested in a slight trace of albumin and a few granular and hyaline casts. There is always anorexia during the febrile course and a considerable after-depression."

Pellagra on the Canal Zone

At Hospital Santo Tomas, in Panama City, the records show that 84 cases of pellagra have been admitted since 1911, while at Ancon Hospital 47 cases have been treated. I find that pellagra has occurred more frequently among the Jamaicans and Barbadians who reside on the Isthmus. However, cases have also occurred in natives from the following countries: Martinique, Granada, Guadaloupe, Trinidad, St. Lucia, Antigua, Panama, and the United States. One case of pellagra developed in an American from Indiana, a conductor on the Panama Railway. This man lived in Mexico for four years before coming to Panama and possibly the disease was contracted in that country. He was discharged in good condition from Ancon after six weeks' treatment, and was able to return to work, but a few days ago he was admitted to Santo Tomas Hospital with all the symptoms of a recurrence of the disease. In my wards at Santo Tomas I have at present 5 women pellagrins, 4 of whom have every symptom of the disease.

DEATHS FROM PELLAGRA IN PANAMA, COLON AND CANAL ZONE

	Ancon Hospital	Colon Hospital	Panama	Colon	Canal Zone	Total
1909.....	1	2	..	..	..	3
1910.....	..	5	..	..	..	5
1911.....	1	11	7	1	..	20
1912.....	6	7	8	1	1	23
1913.....	5	4	14	..	..	23
1914 (9 mos.)	1	1	21	3	1	27
Totals	14	30	50	5	2	101

We see all the clinical manifestations of the disease: the scarlet red tongue, which is protruded with difficulty; dull pain in the stomach, with heartburn; diarrhea; vaginal mucous membrane red; anus red; the dermatitis on the dorsal surface of hands, forearms, elbows, neck and feet; grave mental and nephritic complications, and so on.

In Santo Tomas we are treating these cases of pellagra as follows: Milk, broths and fruit juices as long as nausea and vomiting are present, and then a generous diet free from carbohydrates; dilute hydrochloric acid, 15 to 30 minims in a glass of water t. i. d. We have used Fowler's solution and salvarsan with varying results.

Dhobie Itch

In Panama we see many different kinds of skin diseases, but the most common is that persistent, troublesome disease caused by the *microsporon minutissimum*—dhobie itch. We have had a great deal of trouble in curing dhobie itch, but the following formula relieves the itching promptly and sometimes effects a cure:

Acidi salicylici.....Gm. 2.00
Hydrargyri ammoniati.....Gm. 2.00
Bismuth subnitratis.....Gm. 6.00
Olei eucalypti.....Gm. 6.00
Lanolini, q. s. ad.....Gm. 50.00
M. Sig.: To be applied to the affected part.

Uncinariasis

The International Health Commission, which was organized in 1913, extended its campaign to the eradication of the hookworm from Panama and Dr. L. W. Hackett has been appointed director of this work in this Republic. Laboratories have been opened at La Chorrera, Panama City, and Bocas del Toro, and other laboratories will be opened as soon as the work progresses further.

Since this work has only just started very little can be said of it. At La Chorrera, 700 out of the first 1000 persons examined were found to be harboring hookworms.

The following treatment is carried out in these cases: Liquid diet at noon; calomel, grs. 3, at 4 p. m.; no supper; magnesium sulphate solution, 2 ounces at 1 a. m.; no breakfast; thymol, grs. 30 at 5 a. m.; repeat at 6 a. m. (in capsules); magnesium sulphate solution at 9 a. m. (2 ounces); dinner as usual.

Subarachanoid Anesthesia

I am sure that you will be interested in the success which we have had with subarachnoid analgesia at Santo Tomas Hospital. More than 4,000 cases have been operated on under stovaine in this hospital and with great success. This agent is used for all operations below the costal border unless absolutely contraindicated. The prep-

aration that we use is made by Carlo Erba, Milan, Italy, and comes in 5- and 10-centigram ampules (in physiological solution). The only preparation consists in painting the site for injection with a solution of iodine, to be followed by alcohol. We use the Record syringe and a long platinum needle. These instruments should be boiled in distilled water.

The patient lies on his side with knees drawn up; a small amount of alypin solution is now injected subcutaneously to anesthetize the skin overlying the third and fourth lumbar vertebra. The needle is now pushed slowly forward through the skin and ligament until the dura is punctured, after which we have a free flow of cerebrospinal fluid. After 5 or 10 drops escape, the syringe is inserted into the base of the needle and the stovaine solution is injected into the subarachnoid space. Flexible collodion is painted over the puncture and a sterile gauze pad is fixed over the part with adhesive plaster. The patient is now turned over on his back and prepared for operation. In from three to ten minutes the patient is ready.

In genitourinary work and minor operations, we use 5 centigrams of stovaine and in other operations, from 8 to 10 centigrams. After the operation, morphine sulphate, 1-4 grain, is given to control postoperative shock. Stovaine is an ideal anesthetic, especially when the surgeon is confronted with lack of assistants. The after-effects are *nil;* the patient remains conscious during the operation; we have perfect analgesia; absence of postoperative shock; no postoperative pulmonary irritation; and no postoperative restlessness, which we see so frequently after ether or chloroform anesthesias.

Infant Feeding

One of the most prominent physicians in the Panama Canal Medical Service has made the following statement: "About 20 percent of the babies born in Panama die before they reach the age of one year, and a greater number of these from preventable causes."

Of course the majority of these cases occur among negroes and Panamanians of the lower classes. One reason for this high mortality is the use of sweet condensed milks and "pap." When a negress says that she is giving her baby "pap," she means that she is giving the child almost anything that can be eaten or drunk.

The Department of Sanitation of the Isthmian Canal Commission has published a table for feeding infants which is given below in abbreviated form.

TABLE FOR INFANT FEEDING

Age of Infant	Formula	Amount of each feeding	Interval of feeding	No. of feedings daily	Diluent water
1 day.....	Plain boi A B C	led wat	er two	or three	times
2 days.....	1 3 60	½–1 oz.	2 hrs.	6–8	Boiling
3 days.....	1 3 50	½–1 oz.	2 hrs.	3	Boiling
4 days.....	1 3 40	1 oz.	2 hrs.	10	Boiling
5 days.....	1 3 30	1 oz.	2 hrs.	10	Boiling
6 days.....	1 3 24	1½ oz.	2 hrs.	8–10	Boiling
7 days.....	1 3 20	1½ oz.	2 hrs.	8–10	Boiling
1 to 4 weeks....	1 3 16	2 oz.	2 hrs.	8	Boiling
4 wks. to 3 mos..	1 3 12	3–4 oz.	2½ hrs.	7–8	Boiling
3 to 6 months ..	1 3 12	5–7 oz.	3 hrs.	7	Boiling
6 to 9 months ..	1 3 12	7–9 oz.	3½ hrs.	6	Barley
9 to 12 months .	1 3 12	8–10 oz.	4 hrs.	5	Barley

A—Sweet condensed milk.
B—Unsweetened condensed milk.
C—Boiling water, or, after six months of age, barley water.

One or two teaspoonfuls of lime water are added to each bottle just before feeding. Also a few grains of salt is added to each feeding. If constipation is encountered, one teaspoonful of milk of magnesia is used instead of lime water. The results obtained here, after using this method of infant feeding, have been perfectly satisfactory.

Other Diseases Encountered

The secondary eruption of syphilis is seen frequently among the natives and West Indians. A large number of cases of beri-beri have been seen at Santo Tomas, but a majority of them have come from Pearl Island, fifty miles from Panama City, and the victims are usually pearl-divers.

Since 1905, no cases of yellow fever have originated on the Canal Zone, and since 1908 no cases of bubonic plague.

Only two cases of sunstroke have been reported since the Americans have occupied the Canal Zone. These occurred in foreigners and were reported by Major George Crabtree, Medical Chief, United States Army.

A Visit to London and Sir Almroth Wright

By Herman J. Achard, M. D., Asheville, North Carolina

IN THE fall of 1913, when the government investigation of Dr. Karl von Ruck's method of preventive and therapeutic immunization against tuberculosis had to be interrupted by Doctor von Ruck, at least in his laboratory in Asheville, because of a difference of opinion concerning the manner of conducting that investigation by the representatives of the Hygienic Laboratory, the Doctor decided to have his tuberculosis remedies investigated and, if possible, confirmed by impartial observers abroad of whose competency and fairness there could be no doubt. Accordingly, arrangements were made with Sir Almroth E. Wright, at St. Mary's Hospital in London, with Privatdozent Dr. F. Weleminsky of the Hygienic Laboratory of the German University of Prague, and, later, with the directors of the Ser-Therapeutic Institute in Vienna, the Pasteur Institute in Paris, the Hygienic Institute in Danzig—Professor Petruschky, director—and, at the latter's suggestion, in the Koch Institute in Berlin.

Since early in March of 1914, my colleague, Doctor Clemenger, of Asheville, had been in London, attending to the immunization of a number of experiment animals, and, in June last, Dr. Karl von Ruck himself went abroad to conclude the experiments in London and then to go on to Prague, where likewise experiments had been started for him. I accompanied him, partly at his personal wish, partly for the purpose of aiding in the work in London and of attending to that in Prague, Danzig, and elsewhere.

In London, we were detained, principally on account of the great prevalence of pseudo-tuberculosis among guinea-pigs and rabbits, which made our work with these animals almost impossible. When finally we succeeded in completing our part of the work, by infecting all the animals used in our experiment, and these thereafter required only watching and suitable care until the proper time when they were to be killed and examined, the war had broken out and it was impossible for us to reach the Continent. There was nothing left for us but to return to Asheville, and we were only too glad to do so.

During our stay in London, I was closely confined to the work in the laboratories in St. Mary's and when not there I was almost entirely with Doctor von Ruck, whose health by no means was good. This is the reason why I saw nothing of "medical London" and hardly anything of the city itself. Of course, I walked through the streets and observed people and things; in fact, these were so much more interesting than the few big show places I had an opportunity to inspect. I have seen the British Museum, Saint Paul's, Buckingham Palace, the War Office, Westminster, and the Houses of Parliament, and a lot of other notable institutions, but have entered only a very few of them. Of all the numerous hospitals I have seen none other than St. Mary's.

But for a few rides on the 'bus and one ride out in the country, when accepting Sir Almroth's invitation to spend Sunday afternoon at his cottage in Stokes Poges, nothing of the country round about London came to my observation, and even Kew Gardens and Crystal Palace are only dimly in my remembrance from having seen them on a former occasion, twenty-six years ago. Consequently, all I can speak about concerns Sir Almroth and his institute, besides what I saw and observed in going along the streets of London.

A Thumb-Nail-Sketch of Sir Almroth

Almroth E. Wright, the second son of the late Rev. Charles H. H. Wright, D. D., was born in the year 1861. He was educated at Dublin University (B.A., first gold medalist in modern literature, 1882; M. B.; B. Ch., medical traveling prize); had studentship at Inns of Court in jurisprudence and Roman and international law; and also studied at the universities of Leipzig, Strassburg, and Marburg. In 1887, Doctor Wright was demonstrator of pathology in Cambridge University; in 1889, he received his degree of Doctor of Medicine; and for the next two years he was demonstrator in physiology at Sydney University. From 1892 to 1902, Doctor Wright held the position of professor of pathology in the Army Medical School at Netley; was a member of the Indian Plague Commission from 1898 to 1900; and in 1902 was appointed pathologist at St. Mary's Hospital, London.

The Department of Therapeutic Inoculation at St. Mary's Hospital was instituted by Wright in the fall of 1905. The method of vaccine treatment had, prior to this, been gradually perfected by him in the pathologi-

cal laboratory of the hospital, and the treatment of patients by this method had been carried out for three years in the pathological department (*Medical Record*, June 3, 1911).

In 1906, Doctor Wright was knighted; became a Fellow of the Royal Society in the same year; and in 1908 he received the Fothergillian gold medal from the Medical Society of London. He is also an Hon. F. R. C. S. I. and Hon. Sc. D. (Dublin).

Sir Almroth E. Wright is the originator of the prophylactic antityphoid inoculation treatment, which he introduced during the Boer war; of the system of therapeutic inoculation for bacterial infections or "vaccino-therapy"; and also of methods for measuring the protective substances in the blood. He is the author of several books, besides contributing numerous articles to current medical literature. (The foregoing information has been supplied by the Research Bureau of Nelson's Cyclopedia).

St. Mary's Hospital, Where Sir Almroth Wright Works

The first time that I saw Sir Wright he was at tea, surrounded by his assistants, all drinking tea, eating cake, and chatting. Tea is more than a custom in England—it is a solemn rite. The Englishman would rather do without his cigarette or his pipe—and he loves both—than without his afternoon tea.

Everybody takes tea at four o'clock or so, and for the time everything is at a standstill. As soon as one of the laboratory servants announces "Tea is served," all the work stops. Whoever happens to be talking to you breaks off with "Come, let's have some tea," and leads the procession to the inner laboratory, where a white cloth is spread on one of the work-tables. A silver tea-pot, donated by some former assistant, a ditto sugar-bowl, an ordinary quart bottle of milk, heavy crockery cups in far greater number than are likely to be used, and two or three teaspoons for the crowd. A bagful of cookies or cakes or something of the sort are quickly spread on a platter, and soon everybody is happy, drinking tea and conversing. What odds that the subject of conversation is "shop"; that's a matter of course among medical men. But it's informal, it is chatting, and it is rest.

There is Sir Almroth, seated in a comfortable chair after having filled his cup; everybody waits on himself. The assistants about him, leaning their elbows on the table, some chance visitor, all engaged in their beloved afternoon "snack." We follow as a matter of course and actually enjoy tea and cake and the conversation, the latter spontaneous and sincere, and not infrequently including a considerable amount of guying.

As already said, the function is strictly informal and therefore enjoyable. But let some luckless visitor become fulsome or formal—Doctor Freeman told me that it was especially American visiting physicians who make that sort of break—and tell Sir Almroth of the great honor that is being done him, and the inestimable privilege he is enjoying of taking tea with Sir Almroth E. Wright, and he freezes up at once and the happy play-hour is spoiled.

Wright does not like formality. I had met him three or four times when, tea being announced while I was talking to him, he got hold of my arm and said, "Come, Achard, let's go to tea."

One Saturday soon after our arrival one of his sssistants came to us and transmitted Sir Almroth's invitation for the next day to take tea with him at his cottage in Stokes Poges, and he begged us not to don any formal clothes, because that would spoil Sir Almroth's pleasure. He does not like fulsome compliments.

A simple acknowledgment or statement of the importance of his work, of help derived from his writings, pleases him.

Anything laudatory, any kowtowing is distasteful to him.

Wright has a keen sense of humor. His kindly blue eyes, which blink through bisected lenses enclosed in heavy silver spectacle-frames, usually have a good-natured twinkle. And he likes a good joke. Once in the clinic, he raised some absurd question and then remarked that it would be such fun to refer that problem to the Pasteur Institute in Paris, because it "would make Roux *so* angry." I have been trying to remember just what it was about, but all I can recall is the quiet chuckle and the twinkle in those clear eyes as he repeated, it "would make Roux *so* angry." When one of the clinical assistants whom Doctor von Ruck had vaccinated exhibited a tremendous reaction and felt absolutely rotten during the first forty-eight hours, Wright twitted von Ruck unmercifully and accused him jokingly of having done the most awful things to "poor Horer." Poor Horer, indeed! A few weeks later, one evening, he was indulging in some horseplay with the other internes and struck his knees against the wall, breaking both patellas. The poor devil was terribly "cut up," for he had entered the service only recently and was to have gone up for examination. In August, when we quit London, Horer, instead of going to war, was lying in bed with his knees in plaster casts.

The Staff of the Wright Laboratories: A Happy Family

Wright is surrounded by a splendid set of assistants, who fairly worship him. There, for instance, is Captain Douglas, his coworker for many years, retired from the Indian Medical Service because of ill health. A clever laboratory worker, excellent bacteriologist, and experienced experimenter, Douglas is, himself, no mean authority upon infectious diseases and has a remarkable and keen understanding of the problems of immunity. He has been associated with Wright for years, and many important papers were published by them jointly.

Captain Hayden, whom an attack of anterior poliomyelitis left with both legs paralyzed, sits at his workplace, always busy, always cheerful and smiling. He prepares the cultures for vaccines, does most of the opsonic and also some Wassermann work. He has devised several valuable laboratory apparatus.

Mr. Alex Fleming is a syphilographer of note, who in 1909 proposed a Wassermann-reaction technic for quantitative work which gives the most clear-cut results I ever have seen. Mr. Fleming resents being called "Doctor," in common with many English medical men. He often seems to have a sneer for persons and things around him, but is true-gold, nevertheless. He considers his specialty to be the "best ever," because it is so tremendously interesting, and, moreover, "there is absolutely no temptation, because you know just exactly what the women are who come to you."

Dr. John Matthews is a tall, good-looking chap of soldierly appearance and bearing. He is extremely faithful in his attendance both in the laboratory and the clinic. He also does Wassermann work and at present is engaged in some special investigations.

Dr. John Freeman, tall, spare, friendly, is the youngster of the crowd. I was told that Doctor Freeman went through the Boer war as a private, and that he is a dead-shot. At the beginning of the present war he promptly enlisted, because he "wanted to shoot up some Germans." His principal researches refer to the prevention and treatment of hay-fever. By prophylactic vaccination with a vaccine prepared from the particular pollen to which a hypersusceptibility exists, he claims to be able to prevent an attack. His therapeutic experiments have not yet produced tangible results.

Doctor Colebrook and Dr. Parry Morgan accompanied Sir Almroth to the Transvaal, in 1913, for the purpose of investigating the problem of pneumonia infection in the mines, and to discover means for its prevention.

Doctor Colebrook, the *fidus Achates* of Wright, and his constant companion, is very close to the Doctor and aids him in much of his literary work. Doctor Morgan, a Welshman, has a fondness for mathematics and attempts to reduce every problem to a mathematical equation. During our stay he had just perfected a most ingenious method for the application of artificial pneumothorax. There remain the clinical assistants, Doctor Horer and Doctor Turner, the former of whom I have mentioned. Doctor Turner I did not come to know at all. Mention is also required of Doctor Colebrook's dog, a tiny, coal-black Pomeranian, who is the general pet and is as noisy as he is tiny. At tea time he is an important member of the "round-table."

Everyone Has a Pet Name

An odd custom, to an outsider, which these grown men have taken over from their school days is the habit of calling everybody by a

pet name. Douglas is promptly abbreviated to "Duggy," Colebrook to "Coley," Fleming becomes "Flemmy," Hayden is "the skiffer" (I did not learn the origin of this nickname), Morgan is called "Parry" and so on. Wright is "the Old Man" or "Pa," even so called to his face. His relations to the men are the most cordial and they will do anything for him.

Captain Douglas also succeeded in training a good set of servants, all of whom do their work under the somewhat martinet-like supervision of George, the chief of them, like clockwork.

Altogether, once having succeeded in breaking through the natural reserve which is as much a part of the Englishman as are his "morning coat" and his silk hat, we found these men most cordial and exceedingly courteous, always willing to discuss any topic of interest broached or to enjoy a joke. Aside from their duties in the laboratory, in which they carry out important and interesting researches, they also are instructors in the medical school of the hospital and in the special courses given in the laboratory; the latter being visited by physicians from all over the world, Of course, the assistants also attend to cases on clinic days.

Work in the laboratory nominally starts at 10 o'clock in the morning; however, at this hour the place still is in the hands of the servants, who clean up the whole establishment with the greatest care; but, by 11 or 12 o'clock, all of the men generally have arrived and the work of the day is under way. The laboratory-day lasts until 5 or 6 o'clock, although not infrequently one or the other of the workers will be busy with his experiments far into the night. I myself have spent many a night there, doing complement-fixations.

Those Clinics

When Wright wrote as the motto of his "Studies on Immunization" that the physician of the future will be an immunisator, he expressed his honest conviction, upon which he acts. For, in his clinics, pharmaceutical therapy is practically absent. One of his assistants repeatedly asked me in regard to some alkaloids I had mentioned and referred to the fact that with them drugs virtually were taboo.

Sir Almroth is very tall and very large. He is big in everything, in body, mind, heart. It is beautiful to watch him, on clinic days, speak to his patients, all of whom are exceedingly poor. He questions these people—uncouth and ignorant mostly they are—and enters into their cases as though there were nothing else for him, and all this with a so manifest and sympathetic air of interest that one does not wonder at the worshiping affection with which the patients all regard him. Even the children are not afraid of him, but are quite willing to be examined and then to be pricked with the inevitable hypodermic needle. True, their reward of a penny for their fortitude is never forgotten. Sir Almroth takes care to fill his pocket with these useful bribes on clinic days. On these days, the stairways and the halls of the department are crowded with people wanting to see Sir Almroth.

His clinic is held in one of the laboratories, while several of the assistants receive patients in separate treatment rooms. About half a dozen patients are admitted at one time into the laboratory, where Sir Almroth is standing by a work-table covered with bottles containing different vaccines, a number of hypodermic syringes, cotton, alcohol, and an apparatus in which oil is kept boiling for sterilizing the "hypos."

As the patients come up, one at a time they hand over their record cards, which are obtained in the secretary's room on entering the building. Each in turn, Sir Almroth questions the patients concerning their progress. The records are kept almost entirely in accordance with the subjective reports of the patients, while the vaccines are administered according to the kind of infection discovered in the secretions. At times, autovaccines are prepared and employed. Quite frequently multiple vaccines are used to a degree amounting to polypharmacy. For the treatment of tuberculous lesions, Wright uses Koch's T. B. emulsion (B. E.)

Physical diagnosis is rather neglected at St. Mary's, in favor of bacterial diagnosis. Dr. Parry Morgan expressed his astonishment at the interest displayed by Sir Almroth in the chest examinations demonstrated to him by Doctor von Ruck, as he has always been rather inclined to pooh-pooh them. During our stay there, Sir Almroth frequently asked Doctor von Ruck to examine patients for him, and was immensely taken with the ability shown by the Doctor to foretell much by inspection of what percussion and auscultation would disclose.

The clinical material contains an unusual amount of cases of scrofula and of lupus, both of which appear to occur far more frequently than they do with us. This possibly may be explained in accordance with the views of the late Professor Arloing, who believed

that the bacilli producing scrofulous or lupous lesions were less virulent than those responsible for pulmonary tuberculosis. As a nation, the English certainly are less inclined to pulmonary tuberculosis than many others. Their resistance, however, is only relative, and the predilection of the tubercle bacillus for the lymph-glands and for the skin gives rise to dreadfully disfigured faces and "shocking" scars.

The work for which we had come to London kept me occupied a great part of the time in the animal-room, where we had established our workshop, and, as this was in quite another wing of the hospital, away from the inoculation department, I did not see nearly as much of the latter as I might have wished. Nor did I find the time to go through the hospital or to see other hospitals and medical schools. Even of the visitors from the great Surgical Congress, held in July, I saw as good as nothing. For that reason, it is impossible for me to touch upon medical life in London, as I have said before, and can only chat briefly about my own experiences.

What One Sees in London

The street-life of London presents many interesting phases. First and foremost in their insistent claim for notice are the motor "busses," the successors of the old horse-drawn public conveyances through those narrow London streets. Electric cars, or "trams," are run only in certain portions of the city.

The London motor "bus," a double-decker like its predecessor and garnished with garish advertisements both outside and in, apparently is operated primarily for the purpose of satisfying the racing proclivities of the motorman, or, rather, the driver. Regardless of signals from would-be or actual passengers, this worthy races through the crowded narrow streets and past every other 'bus that he can overtake. Arriving at the preordained stopping-corner, it never occurs to him to fall in line. He drives his 'bus to the head of the line, no matter how many other 'busses may be standing there. If the waiting patrons have to walk half a block before they can board his arch, that is their lookout; they may take a taxi, if they don't like it. During my eight weeks' stay in London I saw just one 'bus-conductor who was polite. He was a happy exception. As a rule his breed are an objectionable, surly, and degenerate lot, in sharp contrast to the police officers, who, for the most part, are courteous and obliging and who direct and guide the stranger with the greatest patience and politeness.

The "shops," or stores, impressed me principally as being exceedingly crowded with goods. Floor space must be very costly there. The show windows likewise are crowded, dressed without taste or system. I do not recall six "shops" where window-dressers seemingly were employed or where the display windows showed any care and study. In these respects, American stores and store-windows are far superior to the English. However, the sales clerks are obliging and quite willing to show their wares. Of course, they recognize American customers by their translating English prices into American money values. Sir Wright once acknowledged to me that the English monetary system —pounds, shillings, pence, farthings—was "barbarous."

As to the crowds one sees on the streets, there is much truth in Doctor Hollen's description (CLIN. MED., Sept., p. 776). If the women are homely and frumpy, the men are untidy and sloppy. I have seen few good-looking, well-dressed women and just as few well-groomed men, and those generally were Americans. The street crowds are orderly enough. A remarkable feature is the absence of soliciting on the street in the evening, and comparatively few women "walk the streets." Those cypriennes are watched closely by the "constables" and may not address men or solicit their patronage. John Bull thinks that in this manner he can solve the prostitution problem. Yet, I have been told that clandestine prostitution exists in London to a terrible extent.

In all but the principal shopping and residence streets, the corner saloons are in evidence, both by sight and by smell; only all too often these "ale-houses" can be recognized from afar by the slatternly women standing outside gossiping, each with a glass of ale in her hand, while their lords and masters are inside at the bar—a very army of "Sarey Gamps" who "likes it regular and drawed mild."

There might be much to tell of Hyde Park, Oxford Street, Piccadilly, then the Strand, the Temple, Fleet Street, and all the places known to us by name, from Dickens' writings, but I fear the editor would bluepencil me; for, after all, I could give only a rambling account of rambling strolls, taken mostly in the evening, after having finished my work in the laboratory.

As a whole, I must say that I do not like London. Still, I have not given it a fair

chance, not having had time to "see London." There are impressive buildings and beautiful statues, magnificent parks and many things of interest. Possibly, if I could spend six months and lots of money in London, with nothing to do but to amuse myself, I might find much to like. If that opportunity ever should come, I hope, though, to be favored with seasonable weather. Even during the summer season we wore winter-clothes and overcoats almost constantly, when "back" home in the States, folks were sweltering.

When the War Broke Loose

The last days of July naturally were full of tension. The catastrophe in Servia, which led to the declaration of war by Austria, seemed to foreshadow some great calamity, and during the subsequent days the political situation was watched with unusual interest. Until the English government officially decided to war against Germany, on the side of her allies, France and Russia, opinions were somewhat divided, although the jingo press of London was doing its best—and very successfully too—to incite the popular mind against Germany.

Being unable to obtain other than English newspapers, it was difficult to form any definite opinion, and the action of the Kaiser, in declaring war in quick succession against Russia and France, seemed so foolhardy as to be criminal. The last months have brought fuller information, and, with it, better counsel, and at the present moment the position of Germany is being viewed more justly.

At St. Mary's, the question of war naturally formed an interesting topic. Inquiries had been made, as in all London hospitals, concerning the number of medical men that could be counted upon; but, beyond that, things moved in their accustomed course. All this was changed the first of August, when it became known that England had entered the conflict. It was on Saturday, a half-holiday, and the town fairly went mad. In St. Mary's, immediate steps were taken for the preparation of typhoid-vaccine for use in the army, over 100,000 doses having been promised for delivery within a few days, and the entire staff turned to making vaccine. Everything else was put aside. The war and the preparations for war were foremost.

Then Came the Foreigners' Tribulations

Then came a difficulty about money. Travelers' checks were no longer accepted. The government had declared a moratorium. Saturday the banks closed. Monday was a bank holiday, and this was extended for three days, so that it looked as though we might get into difficulties, like many other Americans. Several visits to the U. S. Express Company on Monday were fruitless. The office was closed. Meanwhile it had become evident that it would be quite impossible to proceed to the continent, and so, we decided to take passage home—if we could get it. The steamship-offices looked like a stock exchange. Crowds besieged the desks and snapped up all and every chance to get back to America, first class, second class, steerage—it was all one, so you secured passage. The tickets were taken and all berths engaged two, even three, months ahead.

At the Adams Express office, on Cockspur street, I had been promised a reservation for Doctor von Ruck and myself on the S. S. Cameronia, Anchor Line, to sail from Glasgow on August 15. We had to crowd in with two other men, but there was no help for that. "Decide quickly, please, lots of people are clamoring for the tickets." So I paid a few pounds down, to hold the berths. But now arose the question of payment. U. S. Express checks? Sorry, we can hardly take care of our own checks. American gold or gold certificate? Very sorry, we can't take it. Nothing but English gold or banknotes.

Tuesday, August 4, I went to the U. S. Express office, on Haymarket, to get some money. A crowd stood in line, down the block and into the side street, and I had to wait in line two and one-half hours before I could get up to the desk. All sorts of things were told during that wait. One woman was fretting about her daughter who was alone in Paris; another one hoped that her daughter was safe in Dresden. Some people had just come from the continent, *sans* baggage, *sans* food, *sans* the money (except in the shape of travelers' checks) for food, *sans* hat, *sans* everything—except that wild desire to get back to Uncle Sam's shores.

When I finally reached the desk, where six clerks were busy at that many windows, I asked to have cashed a $300 check. "Sorry, but I can give you only $40."

"But I must pay for my ticket."

"Sorry."

Finally I agreed to waive gold and accept banknotes for $100. I tried another line at another window, and got $50 more. When I left the building I gave another check for $100 to Doctor Clemenger, which he managed to get cashed also. In this way I was enabled to pay for the steamer-tickets and had

enough left for our hotel bills and for the railway trip, with incidental expenses to Glasgow. Here, at last, we took the steamer for home.

The last days in London hardly were pleasant. The servants of the hotel were inspired with grave suspicions, because we had a typewriter in our rooms and "typed" a great deal. Accordingly they lodged information at police headquarters, that there were two men, one certainly German, the other possibly so, whom they believed to be spies. Two constables called to look us over, and they must have been satisfied about our harmlessness, for we heard nothing further of the matter.

The announced sailing of the "Cameronia" was as problematical as that of every other boat, and we could not obtain definite information until the morning of departure, in Glasgow. Even the train, which was to take us to Glasgow, was not certain to leave, until about an hour before it started, when we were told that "in all probability the trip would be made."

It was all too unsettled and too irregular to be agreeable. Besides, I had not had a decent smoke, either pipe or cigar, since leaving home, and I was "honing" for a smoke. The first thing I did, upon arriving in New York, was to buy some real cigars and some real tobacco.

His First Baby

By Dr. Frank L. Rose

Hey there! You little wrigglin' chap,
Winkin' and blinkin' on grandma's lap,
What do you think of all this biz?
Cute little feller—ain't he, Liz?

Say, Doc, how much d'ye s'pose he'll weigh?
Ten pounds! Beats Jones's anyway,
Hully Gee! What an arm that is!
Reg'lar Jim Jeffries—ain't he, Liz?

Just see him doublin' up that fist!
He's goin' to be a pugilist,
Or else a preacher, or else—Gee whiz!
Whoops like an Indian—don't he, Liz?

Seems to say as plain as can be,
"I'm lonesome, that's what's a troublin' me,"
Lonesome the poor little fellow is,
But we'll be good to him—won't we, Liz?

Say, Doc, you goin'? Well, good night!
Here's twenty dollars: is that all right?
I'm satisfied and I'll bet she is.
Pretty good doctor—ain't he, Liz?

Five Hepatic Remedies

A Study of Neglected Vegetable Agents of Great Value

By Finley Ellingwood, M. D., Chicago, Illinois

Author of Ellingwood's "Therapeutist"; Author of the "Treatment of Disease," and "Materia Medica, Therapeutics, and Pharmacognosy."

IN CONSIDERING that class of vegetable remedies which directly influence the liver, its structure or its functions, we have a number of very choice agents that, when thoroughly understood, exert an influence with which that obtained from the inorganic—mineral, earthy or synthetic remedies—is in no way comparable.

This action seems to be at once harmonious with the functional operations of the organs, and restorative, both in a general and specific way, of the functioning of the liver, correcting also any harm that has been done, by the imperfect action of this gland, to other organs or structures of the body.

This corrective influence is in the nature of an alterative, and in nearly every case the action of the remedy is much wider than that of one acting upon this organ solely.

To illustrate. Iris versicolor acts upon the liver, and at the same time corrects imperfect digestion by regulating the gastric secretions and to a mild extent those of the intestinal tract. However, a striking result from this remedy, due to its influence on glandular structures, is its modification of those conditions of the skin which have resulted from the imperfect functioning either of the liver or of other glandular organs.

Podophyllum, the most drastic of the hepatics, acts upon the entire intestinal tract; in fact, upon all the glandular organs of this tract, to some extent.

Chionanthus, as will be seen later, acts upon the composition of the blood as well as upon the liver; and, in addition, I am convinced, it has a specific selective action on the pancreas, as its influence upon diabetes mellitus, due to disease of this organ, has proven.

Podophyllum

In administering podophyllum, in any of its forms, we are not, to any great extent, guided by its physiologic action. This physiologic influence is directed principally to the gastrointestinal tract; and so severe and so harsh is this that it must be avoided, since the conditions induced are pathologic rather than physiologic.

Our studies of the action of this remedy for medicinal purposes have developed from empirical observations, and from these observations nothing in the way of precise action has been deduced, other than that shown by the indications immediately to be enumerated. Why or how it should so act, we do not pretend to explain.

Specific Symptomatology

The symptoms which guide us specifically in the selection of this remedy are as follows:

The most conspicuous symptom is the full, thick tongue, which is broad and pale, usually heavily coated, the coat of a dirty-yellow color at the base, with a dirty stripe, upward toward the tip, in the center of the tongue.

The entire venous circulation of the body is sluggish; there is fulness of the tissues; the heart's action seems to be impeded; the pulse is large, soft, but apparently oppressed.

There are all the indications of torpor, inactivity or actual atonicity of the entire intestinal tract. Usually there is pronounced constipation, resulting from imperfect peristalsis because of lack of normal nervous irritability. Often there is vertigo, dull, heavy headache, more or less complete anorexia, and all the abdominal viscera are in a plethoric condition. Torpor of the circulation of the liver is shown by a dirty appearance of the skin or by yellowish conjunctivas. The fecal discharges frequently are very light-colored, light-yellowish or gray, and float upon water; still, this condition so often is present, without the train of symptoms just described, except for the evidences of a mild jaundice, that it is met better, perhaps, with chionanthus—as will be shown later on.

It is seldom that physicians in large cities encounter this train of symptoms, unless the patient has recently come from a malarial neighborhood. These symptoms are met with more frequently in malarial regions, as the result of malarial influences; and there is no doubt that in the thickly populated sections of the country, especially among those not engaged in rural occupations, these conditions are infrequent. The habits of city life are likely to bring on a train of symptoms that are diametrically opposite to those here named.

Podophyllum is contraindicated whenever there is constipation or irritation of the stomach or bowels from inflammatory causes, or where any of the gastrointestinal organs are in an abnormally irritable condition. There is a group of symptoms, characterized by sallow skin and yellowish conjunctivas, where the patient is in a high degree inactive, listless, and very constipated, while the liver is markedly sluggish—a state known as biliousness. In this condition, there are times when the bile seems to escape very freely, the patient vomits bile, and, owing to absorption, bile is found in the urine, which latter is highly colored and at the same time contains large quantities of uric acid, besides urates in great excess.

If, by percussion, the liver is found to be enlarged and the dulness greatly increased, while the patient is indisposed (as is the rule), and there is soreness over the liver and pain throughout the right hypochondrium, podophyllum is indicated.

In that form of constipation which is characterized by infrequent discharges of solid, hard stools, which may at times be almost black in color, but usually are grayish or of clay color, podophyllin is markedly beneficial. However, if these symptoms be accompanied by jaundice, I have secured better results from some one of the others of this group of remedies. Its effect upon chronic constipation and in the treatment of gallstones and jaundice will be mentioned further on.

Podophyllum can be combined with nux vomica and collinsonia and thus given for the treatment of hemorrhoids, with excellent results. The specific conditions having been determined, this combination will cure many conditions not otherwise influenced. However, the indication for podophyllum here will disappear very much more quickly than those for the other two remedies named, especially that of collinsonia, and the latter, either alone or combined with hamamelis, can then be continued until the cure is complete, which need not be long; again resorting to podophyllum, however, if its specific indications reappear.

I have used podophyllum, in the form of fluid extract or the "specific medicine," as an alterative, during my entire practice. If a condition of general plethora is present, the skin is waxy, dull or yellowish, or if there be any skin disease present, I often add to my other alterative remedies just enough podophyllum to ensure a normal bowel movement each day. I have seen surprisingly good results to occur from its use in this manner. I combine it with phytolacca and very small doses of acetate of potassium in the treatment of those mild forms of eczema so common on the faces of infants and also older children, where there is a cracked and fissured condition of the skin, or where there is a tendency to persistency in mild pustular conditions. I have seldom been disappointed in these cases, occasionally using at the same time some mild external application.

Podophyllin in Venereal Disease

I seldom, if ever, omit podophyllum in the treatment of syphilis with vegetable alteratives. Right here I want to impress upon the readers of this journal the fact that syphilis positively can be eradicated from the system, even in the third-stage cases, by the persistent use of vegetable alteratives. I may, if the editor will permit, at some future time write an article on the treatment of syphilis without mercury, and that by the use of this class of remedies.

So strongly is the profession impressed with the idea that syphilis cannot be cured except with mercury and arsenic, and especially that it cannot be cured with such mild remedies as the vegetable kingdom produces, that no practitioner will undertake the cure with this class of remedies on its first suggestion; invariably must he use some very powerful inorganic remedy.

But, once a physician has cured a bad case by means of vegetable alteratives, with perhaps the addition of iron, if there be anemia, the surprisingly smooth, satisfactory, and very complete results obtained will so convince him of this curative influence that he will not hesitate to try it a second and a third time; for, repeated successes will convince him that this method is wonderfully efficacious and satisfactory, not only so far as the physician is concerned, but the patient as well, while there are absolutely no untoward consequences whatever.

The use of podophyllum in the treatment of gonorrheal epididymitis has been recommended by one of our best authorities. This writer claims that, if it is given with the bitartrate of potassium and given in proper-sized doses every two hours, it will relieve the pain and greatly abridge the inflammation.

Incidentally, all that I have said concerning podophyllum applies to the fluid preparations of podophyllum-root. The resinoid, or podophyllin, has a somewhat different field. It is more than likely, however, that careful adjustment can secure very satisfactory results in the field above named, although my

own experience has been with the other form of this remedy.

The resinoid was introduced to the medical profession by Dr. John King, who first prepared it. This at one time was, and in fact is now, used more extensively than the fluid preparations, not only by "regular" physicians, but also by those of our own school. It was the very first of the resinoids to be separated and was brought out in 1835.

This resinoid possesses the cathartic properties of the complete medicine in an active form. Some individuals are more susceptible to it than are others. A cathartic dose usually requires six hours in which to operate, but the action is drastic and persistent and may continue, especially if a large dose be given. The influence of this action is general, not only increasing the secretions of the intestinal glands but those of the skin and kidneys as well, while in many cases it produces ptyalism, like mercury. At one time it was called the vegetable lancet, because of its action upon the secretions.

Large doses of podophyllin have long since been avoided. Its preparation in various triturations enhances its action and prevents any irritating influence.

Specific Symptomatology

The indications for the use of podophyllin are similar to those named for podophyllum, except that there is usually more dizziness, in some cases extreme vertigo, in which a full dose of podophyllum will produce an effect sufficient to remove the entire condition temporarily. There is general indisposition, lethargy—inactivity; there is atony of the intestinal tract, also sense of weight and fulness throughout the entire abdomen. There is an expressionless countenance; also fulness of the veins and a full, open pulse. The stools are distinctly clay-colored and float upon water, or they may be hard and dry, in the form of scybala. The abdomen is distended and there are constant colicky pains.

It is contraindicated whenever there is irritation of the intestinal tract, where the features are pinched and the tissues are contracted, where the pulse is small, wiry, and hard, with a sharp stroke.

Wherever there is a thick coat at the base of the tongue and a narrow yellow coat, yellowish and dirty, down the center of the tongue, a trituration of podophyllin, by means of which the patient will get 1-40 to 1-150 of a grain at a dose, taken before meals and at bedtime, will induce very prompt action. The remedy will exercise its influence without irritating the stomach or bowels.

It is surprising how promptly a train of symptoms will yield to the beneficial action of granules of podophyllin. It is much better to give this remedy in minute doses and repeat them oftener than it is to give less frequent large doses.

Podophyllin materially facilitates the removal of gallstones. It will permanently cure the conditions which give rise to them, and those which cause chronic constipation. In the latter condition, like cascara, it must at no time be given in full active doses.

It will stimulate intestinal secretions and peristalsis in children quite satisfactorily, will overcome dry stools and that condition of constipation in which there are erratic colicky pains and a distended abdomen; but the dose must be very small.

While it is commonly used as a remedy for jaundice, it will be found, before we get through with this article, that we have better agents or that we have agents to be combined with this one to better advantage than the podophyllin alone. It is usually combined to advantage with hyoscyamus or belladonna, to prevent its irritating influence, when given as a laxative.

Leptandra

Leptandra virginica is one of our old-time liver remedies, from which I, personally, have obtained very satisfactory results. It will be observed that the specific indications for these hepatics are very similar, but I am inclined to think that this one is more characteristically the malarial remedy.

In these cases as mentioned under podophyllum, there is wide dulness, on percussion, over the right hypochondrium, fulness of the superficial circulation of the abdominal structures and sluggishness in the capillary circulation of the intestinal glands. There is a cool or cold skin; a general dull pain in the bowels; melancholia, general depression; great lassitude; all these especially from malarial causes.

There is a special group of symptoms that I have frequently found, in which I have given this remedy, with excellent results. In addition to the above-named initial symptoms, the patient becomes very sluggish, anemia develops and progresses, and ultimately dropsy follows. Later, the tongue becomes thick and pallid, easily indented by the teeth; there is palpitation, and a gradual loss of strength until the patient is thoroughly incapacitated for any physical labor. The

heart may not be actually diseased at first nor may the kidneys be greatly involved, but those organs are liable to become seriously impaired later, all from chronic malarial conditions. The resinoid, or concentration, leptandrin, acts fully, I think, in the entire field of the fluid preparations.

Action on Periodicity

I think the most satisfactory results I have ever obtained from leptandra were from the use of proper doses associated with quinine and some gastrointestinal stimulant, to break up the periodicity of protracted malarial fever.

I believe that there is a definite time in which to give quinine for its immediate effect on periodicity. In severe cases, many physicians have failed to secure results from enormous doses of quinine, because it was not given at the proper time.

I remember distinctly one of my first experiences. I was called in consultation with an old physician, who had given from 1-2 dram to 1 dram per day, perhaps for a long period, without results. The patient, at the time for the chill, would become unconscious and subsequently would have a mild form of delirium or mental perversion.

The doctor asked me to write a prescription applicable, in accordance with my judgment, to that particular case. I prescribed a dozen capsules, each of which contained 3 grains of quinine, 1 grain of leptandra, and 1-4 grain of powdered capsicum. One of these was to be given five hours before the expected paroxysm. Two more were to be given after two-hour intervals; thus leaving one hour to elapse after the last capsule and before the first chill. This course was to be repeated every day, or on alternate days, at the same hours, if there was any recurrence of the chill. There was no severe chill after the first day, and on the fifth day he was able to go about his work for a short time. Later, this patient was completely restored, without any other treatment.

This is my one experience in my entire professional work in this direction, and I know of thousands of physicians who have adopted a similar course, and who almost invariably secure good results. The leptandra, so combined, seems greatly to facilitate the antiperiodic effect of the quinine and its destructive influence upon the plasmodium malariæ.

Leptandra will materially benefit malarial fever of every kind, especially remittent fever. It is an excellent remedy to add to vegetable tonics, especially when malarial conditions prevail. It improves the tone of the intestinal organs, increasing functional activity. I often have given it with small doses of wine or some mild stimulant, or together with the tincture of nux vomica, with excellent results. Its continued use produces dark-brown or black stools. It increases the flow of bile and, thus, is of material benefit in the treatment of jaundice. I think this remedy is underestimated and believe the profession could well prescribe it much more extensively.

Chionanthus

The liquid representatives of chionanthus virginica, or fringe-tree, are prepared from the bark of the root. I cannot understand why this remedy has not come into more general use by the entire profession. I am sure that my experience with chionanthus in jaundice of every form has been confirmed by many other prescribers. Certain it is that there has been no case of jaundice, whatever its cause, in which I have not seen some little effect from it, while I have cured so many cases of simple obstruction of the ducts and of functional disorders of the liver, and had so very few failures, that I am convinced that, if there ever is to be a specific for jaundice, we shall find it in chionanthus.

Specific Symptomatology

The first indication for chionanthus is jaundice. The symptoms which induce this disease will suggest this remedy. It seems to exercise its best influence upon the liver when that organ is in a state of acute congestion, with imperfect discharge of the bile, or in those cases where there is simple catarrh of the bile-duct. However, I should not hesitate to give it, whatever the character of the disease; expecting more or less beneficial influence even in as hopeless cases as cancer of the liver. I have always gone on the principle that, no matter how incurable as to its ultimate outcome a disease may be, it is our duty to prescribe those remedies to which the indications plainly point, and thus give the patient the full benefit of every moment of relief from any one symptom that can possibly be secured. By carrying out this program rigidly, I am confident many patients have been cured who under other methods or other treatment certainly would have proven incurable.

Acute jaundice, with at first yellowishness of the conjunctivæ and subsequently of the skin, which also may become very deeply stained, and where there is pain in the

right side and acute colicky pains in the abdomen, is satisfactorily treated with chionanthus. As a curative remedy, this agent should be used early; and, while a cathartic effect should not be persisted in, this effect at the start may be desirable. Subsequently better results are secured by giving the remedy just short of any active cathartic action.

Chionanthus in Cholelithiasis

When this train of symptoms occurs, with evidences of the presence of gallstone—especially where there is gallstone colic—the entire experience of the highest authorities of the world has not produced a better course of treatment than the one to be outlined; this is a fact I have had proven by so many experiences in my life that I am convinced that the statement is true. This is my procedure:

If the jaundice appears prior to the pain caused by the expulsion of a calculus, give chionanthus at once. If on pressure there is soreness, also sharp, cutting pains, combine the chionanthus (even if the latter severe symptoms do not occur) with bryonia, 20 drops of a good preparation in 4 ounces of water, and give a teaspoonful every hour or two. In addition, place a hot-water-bag over the liver. When the pain sets in, administer a hypodermic injection of 30 or 40 minims of "hypodermic" lobelia, or lobeline sulphate. If immediate relief does not follow, give another hypodermic, this time 1 dram, of the lobelia an hour later. However, do not fail to give at the same time 1-2 dram of dioscorea vilosa in 1-2 teacupful of hot water. This latter dose may be repeated in thirty minutes.

Under this treatment, in less than two hours' time, without the aid of morphine or any other anodyne, in all but a very few cases complete relief will be experienced; and with the aid of appropriate vegetable hepatic remedies the patient may be tided over without an operation. Of course, accumulation of gallstones can be removed only with the knife. However, if an operation has to be performed, the patient should have proper treatment with the properly selected remedy of this group. I am confident that I have treated many cases in which under other circumstances an operation would have been considered necessary, but where the patients were permanently relieved by the persistent use of a course of treatment as here indicated.

As stated, chionanthus cures catarrh of the common gall-duct. It certainly liquefies the bile. It prevents the formation of calculi, and promotes the discharge of those already formed, if not too large. While it will not cure those cases in which there is structural occlusion of the duct, or where there are impacted stones, or where there are foreign or malignant growths, it certainly will prove of benefit in these cases; and I am inclined to believe that, wherever an operation is necessary for any disease of the liver, a general tonic effect of this agent upon the structure of this organ will be exercised, given either before or subsequent to the operation.

Chionanthus quickly overcomes the jaundice of infancy and of childhood. Pregnant women should receive this remedy, as it will have a beneficial effect also upon the bile. In malarial conditions where there is lack of tone of the stomach, with inactive liver, it seems to affect the digestive apparatus favorably.

Quite a number of reliable physicians—among whom is Doctor A. P. Hauss of New Albany, Indiana—claim that chionanthus has a specific effect in certain forms of diabetes mellitus, especially those originating from functional disorders of the liver. In addition, Doctor Hauss asserts that he has never yet treated a case of diabetes mellitus in the manner indicated that has not yielded in some way. If no free biliary condition is present or if there is general atonicity, he gives 10 or 15 drops of fluid extract of chionanthus and perhaps 1 or 2 drops of tincture of nux vomica four times a day. He directs the patient to drink, each morning before breakfast, one to two pints of hot water containing a teaspoonful of magnesium sulphate. This reduces the glycosuria.

Other physicians have in large part confirmed the Doctor's confidence. The field is open to investigation as to the action of this remedy in diabetes, and I have no doubt that it will prove an exceedingly valuable auxiliary.

Other Uses for Chionanthus

In the conditions where there is want of activity in the liver cells, where there is extreme irritability and also persistent vomiting of bilious matter (as in dipsomania), this remedy acts beneficially. It prevents the formation of gallstones, and favors their expulsion when formed, thus preventing attacks of bilious colic.

Chionanthus is beneficial in the slow convalescence of protracted fevers in which malaria has been one of the causes. Given under these circumstances, we could extend its symptomatology beyond that given above, so as to include diffuse abdominal pain, pros-

tration, pain radiating from the liver to the umbilicus and associated with nausea, thin, light-colored, watery stools more or less tinged with green alvine matter, and sharp colicky pains within the abdomen, though usually without rise of temperature.

I am confident that chionanthus acts also upon the pancreatic glands and upon the spleen, and I think that to its influence upon the pancreas is due, to some extent, the fact that we secure such good results in the treatment of diabetes mellitus. Others of our observers prescribe this remedy where there is an inflammation of the duodenum causing obstruction of the bile-ducts; also, where there is a necessity for an intestinal antiseptic, when these organs are involved. They assert that the remedy increases the flow of the bile. They also say that it should be employed in chronic gastrointestinal disorders, especially if the glandular organs are in any way involved. In general atonicity of the tract, nux vomica should be added. In other cases, the remedy is combined as the indications may suggest.

Iris Versicolor

Iris versicolor, in official parlance, designates the "root" (rhizome and rootlets) of the blue flag. The eclectics prepare an imperfect oleoresin, to which the (improper) name of iridin (also irisin) has been given. A concentration, representing all the medicinal virtues of the drug, is commercially known as irisoid. The action of this drug is not widely different from that of those previously mentioned. However, there are some diagnostic points, which enlarge this field materially, that must be observed. It has more of an influence upon other glandular organs, probably, than those considered above; and it should be called a glandular remedy. In some of its influences, it is comparable with iodine. It acts directly upon the thyroid gland. It stimulates the entire lymphatic system, as it also does the liver and the spleen. There is a certain sensation of fulness in the throat, a sensation as if the circulation were impeded, which is sometimes classed as the immediate field of action of iris.

I am inclined to think that we have not given this drug with sufficient freedom; I also believe that more of its physiological action should be obtained. It acts upon the salivary glands as well as upon those of the gastrointestinal tract, to a certain extent. Let me quote, as a general statement, a paragraph from Scudder's "Specific Medication:"

"Iris is a valuable remedy in glandular affections generally; in malarial poisoning with involvement of the spleen and liver; in rheumatism; in catarrhal affections, especially in some cases of diarrhea and dysentery; in scrofulous cachexia, particularly in scorbutic females who have leucorrhea, dysmenorrhea, and so on. In syphilis, any stage, but more especially during its secondary and tertiary manifestations, iris is an admirable remedy. In cholera morbus and cholera infantum, it is decidedly beneficial, when given in small doses. In some cases of skin diseases—those in which other iris indications are prominent—it is a most satisfactory remedy. This is markedly true in some cases of eczema, psoriasis, and pustular disease of children. When the mouth is dry and saliva scanty, iris in fair-sized doses is efficient. Iris is recommended in prostatic troubles, and in seminal losses in cases in which there is marked debility, with mental complications."

I should say that the agent is indicated where there is a tendency to the same symptoms with regard to liver disorders as are named above; also in irritable conditions of the mucous membranes of the digestive tract, where the secretions are at fault. This condition is sometimes characterized by neuralgic pains over one eye or involving one side of the face. There is nausea. If vomiting be present, the fluids are intensely acid; there is a sensation of burning and distress in the stomach and in the esophagus; there is pain; sometimes there is regurgitation of food, especially after eating fats or pastry. If there be diarrhea and a burning sensation after the fecal passage, the concentration of iris is very successfully employed. Given in proper doses, it covers a number of intestinal disorders that seem to have their origin in the liver or other glandular structures; and, removing the cause of the difficulty, it contributes largely to the restoration of normal function and tone.

Indicated in Sick-Headache

Those patients who suffer periodically from sick-headache nearly always are benefited by the use of this agent. It ameliorates the attack and at the same time contributes to the removal of the cause as well as to the breaking up of the tendency to recurrence. In the treatment of disease of the thyroid gland or of syphilis, cancer or general tuberculosis or tuberculosis of any special organ, especially of the kidneys or the bones, it always proves helpful.

In that condition which once was known as the strumous diathesis, iris always has been very popular with the observers as one of

A COMPARISON OF THE ACTION OF LIVER REMEDIES

ACTION AND INDICATIONS	PODOPHYLLUM	LEPTANDRA	IRIS	CHIONANTHUS	CHELIDONIUM
LIVER	Active hepatic stimulant, inducing some irritation; causes free flow of bile. Stimulates the portal circulation, influences the entire glandular system. Indicated for enlargement with inactivity; tenderness on pressure, sharp, quick cutting pain under the scapula.	Tonic; mild but positive stimulant; increases liver secretions, without irritation; valuable in malarial disorders which induce hepatic inactivity; valuable in acute and chronic hepatitis, with atonicity. Relieves hepatic congestion.	Mild efficient stimulant in general functional inactivity; valuable in chronic disease where dropsy results from liver disorder; valuable in jaundice from chronic hepatic hyperemia.	Direct stimulant in hepatic congestion, with hypertrophy, especially when the portal circulation is engorged; liquefies the bile; prevents formation of calculi. Indicated by fulness, weight, and dull, steady pain in the liver; especially indicated by acute pain from obstruction of the gall-ducts.	Acts mildly upon the liver, especially when the spleen is involved; overcomes biliary catarrh and jaundice from obstruction, indicated by throbbing tensive pain in the right side, which extends backward beneath the right scapula; reduces cough which depends upon hepatic irritation.
STOMACH	Produces vomiting in overdoses; is a gastric irritant; stimulates glandular action, in atonicity; valuable for this influence, in small doses.	Mild stomach tonic; restores appetite; improves digestion; corrects persistent nausea when due to atonicity.	Induces no irritation, rather soothes irritation; controls mild vomiting and regurgitation, especially if of acid fluids; inhibits secretion of acids; beneficial in achlorhydria.	In overdoses, induces nausea and vomiting, sometimes violent; in proper doses, a mild, soothing stomach tonic.	A mild stomach tonic, improving digestion. No specific action on the stomach.
INTESTINAL TRACT	Emetocathartic; induces griping and pain; in small doses improves intestinal glandular action; indicated in chronic constipation, with hard clay-colored, dry stools. Bowels loaded and bloated; deficient peristalsis; impaction; atonicity, with mild intestinal colic; abdominal plethora.	Induces mild cathartic action, without debility; a sure tonic for intestinal glandular action, improving the function of all intestinal glands; acts freely upon the small intestine; in proper doses, produces no irritation.	Increases intestinal glandular action; soothes intestinal irritation; relieves colic in the region of the umbilicus; relieves hyperistalsis; is valuable also in duodenal catarrh, with constipation and clay-colored stools. Is indicated in splenic enlargement.	Produces but little, if any, intestinal irritation, influences the normal functional action of the mucus-glands of the intestinal tract. Indicated in constipation with hard stools; some colic, or when the feces are whitish or clay-colored, and will float upon water; in choleraic diarrhea, with green discharges.	Indicated in intestinal disorders, with marked atonicity, where there is a tendency to passive venous engorgement. Beneficial in mild constipation, with chronic glandular inactivity, especially if there is edema of the ankles.
TONGUE INDICATIONS	Tongue heavily coated, uniformly yellowish or yellow center, a thick dirty coat, especially at the base; tongue pale and flabby.	Tongue pale, coated uniformly white or grayish-white, and moist; bitter taste in the mouth.	Is indicated when the tongue is narrow-pointed, somewhat red, with thin edges, especially if coated in the center with a yellowish coat; increases salivary secretion.	Tongue flabby, broad, coated white or yellowish, edges indented.	Tongue flabby, full and broad, pale, irregularly coated, mucous membrane pale, free mucus secretion.
BRAIN INDICATIONS	Dull headache; vertigo; uncertain gait; vision faults; patient dull, sluggish, listless, inactive.	Frontal headache from disordered stomach; general dull headache, with confusion of ideas; mental depression; gloominess; foreboding; lassitude; some restlessness; sleeplessness.	Exceedingly valuable in sick-headache from gastric acidity; relieves vertigo, with above indications.	Patient dull or fretful, often inclined to sleep, especially after eating, sleep heavy and not restful, with troubled dreams.	Indicated in persistent fulness of the cerebral circulation from liver faults; in bilious headaches; migraine; and headaches depending upon gastric disorders, also in supraorbital neuralgia.
CIRCULATION INDICATIONS	Pulse full, large, sluggish, and oppressed; capillary circulation imperfect; fulness of superficial veins; extremities cool; oppressed heart action, occasionally irregular or intermittent pulse.	Improves circulation in the mucous membranes; relieves palpitation and irregular heart action when due to stomach and liver disorders.	Relieves functional heart irregularity, and palpitation from gastric and intestinal disorders or if they depend upon liver faults; valuable in heart disorders accompanying goiter or exophothalmic goiter; relieves bilious headaches.	Acts directly upon the venous circulation; indicated when there is slight excess of temperature for some days, with hectic flushes.	Impeded capillary circulation of the mucous membranes, depending upon general plethora.
SKIN INDICATIONS	Skin of a dingy hue, dull, soggy, yellowish, flabby, cool; inclined to eruptions—furuncular, eczematous, or pustular; conjunctivæ dingy, yellowish; eyes dull.	Indicated when the skin is dry and hot, but not when the extremities are cool or cold. Skin yellowish or dingy, but warm; conjunctivæ injected and yellowish.	Stimulates elimination; improves secretion, improves rough, greasy skin or abnormal pigmentation; relieves skin troubles depending on gastro-intestinal disorders.	Skin dingy, yellowish, but warm, with cool extremities; capillary circulation of the skin irregular; conjunctivæ dingy.	Skin pallid or sallow, flabby, cool, occasionally tinged yellowish-green; valuable in skin disorders pending on imperfect elimination.

the essential remedies. In its ability to remove waste and to overcome morbid tendency toward autointoxication, it will be found of value.

There are cases of eczema which are treated better with iris than with any other remedy, I think. It sometimes is used in these cases externally as well as internally. Where there is persistent oozing from the skin, from 5 to 10 drops of a concentrated fluid preparation may be given every two or three hours, or, the proper dose of iridin. Prurigo and psoriasis have been treated successfully with it. In the treatment of goiter, many cases yield most readily, but it is beneficial to a limited extent in all cases. I have treated exophthalmic goiter with combinations in which this agent was a part, with good results.

Chelidonium

Chelidonium is commonly known as the great celandin. While my own experience with this remedy is limited, a few observers have dwelt upon it as being exceedingly efficacious. I quote in full from the writings of Doctor Bloyer, who has been a very close observer of the action of these hepatic drugs. He writes:

"In the chelidonium-case, the tongue and mucous membranes are full, pale, sallow, soggy. The tongue may have a dull, leaden-colored fur upon its surface; the skin is pale, dull, leaden, sallow, even greenish; there are full hypochondriac regions, especially the right; the abdomen is tumid; the feces are light-colored and sometimes frothy, occasionally scybalous; the urine is pale and cloudy and usually of high specific gravity, sometimes offensive in odor.

"The chelidonium-patient is apathetic, heavy, lethargic, indolent; he complains of a bitter taste in the mouth, of prostration; he is inclined to lie down, is sleepy, and describes a numbness or tingling in the back or through the shoulders and the hepatic region. His pains are ascribed to the liver: they are dull, heavy, tensive, tearing; occasionally they are located under the right scapula or near the dorsal spines. The chelidonium-patient frequently has bilious headache, liver-cough, and so on."

Specific Symptomatology

The conditions to which chelidonium are especially applicable are found in those cases where the skin is sallow and pale; where the tongue is thick and fills the mouth, as it were; where it is pale and sallow and the mucous membranes are pale, all pointing to abdominal plethora, inefficient functional action of the glandular organs of the abdominal cavity, and imperfect sluggish circulation both of the tissues, glands, and organs. Indications do not point to any evidences of actual absorption of the bile into the blood, necessarily; nevertheless, these evidences confirm the other symptomatology, especially if there be dark-green and fetid stools—although, in fact, its action often is needed where the stools are clay-colored or very light-yellow; and where the urine, which contains bile, is dark-yellow or reddish and very acid, containing an excess of uric-acid crystals.

In that class of cases where, owing to liver disorders, there is a slow pulse, frequent palpitation, a feeling of weight in the limbs or stiffness and swelling of the extremities, which are cold; where the skin is pallid and doughy or where there is edema, this is counted an important remedy to prevent biliary calculi. Iris has been in use for this purpose for many years, but reliable evidence, confirming such action, necessarily is scanty.

A foreign author at one time recommended this remedy very strongly for the treatment of cancer, giving it in very large doses internally, and injecting it into the structure of the cancer itself; but of late years little has been observed to confirm such action, and it has fallen into neglect.

I am producing herewith a tabulated presentation of the action of the five remedies just discussed, which may assist somewhat in an understanding of their influence.

The Treatment of Urethral Stricture

For the Help of the General Practitioner

By William J. Robinson, M. D., New York City

Editor of "The Critic and Guide" and "The American Journal of Urology;" author of "Never-Told Tales," "Sexual Problems of Today," "Sexual Impotence," etc.

STRICTURE is a narrowing or constriction of the caliber of the urethral canal at some point or points. As the urethra is ordinarily a closed canal, dilating only for the passage of urine, semen and instruments, it would be more correct to define stricture as a loss of, or diminished, dilatability of the canal.

Strictures generally are divided into spasmodic, inflammatory, and organic. It is only to the latter kind that the name stricture should be applied.

Forms of Stricture, and the Causes

A spasmodic stricture is really but a spasm of the compressor urethræ muscle and should be referred to as a spasm of the muscle or a spasmodic constriction. Inflammation itself rarely, if ever, produces a definite constriction of the urethral lumen, definite enough, for instance, to cause retention of urine. An inflammation superadded to a previous organic stricture may cause complete retention, but then it is wrong to refer to it as an inflammatory stricture. It is merely an organic stricture which has become inflamed. The entirely different methods of treatment of spasmodic and of organic strictures shows that spasmodic stricture does not deserve the name of stricture.

Inasmuch as spasmodic stricture is of little importance pathologically, I shall devote but little space to it, paying special attention to organic stricture, and particularly to organic stricture of gonorrheal origin.

Strictures are not met with nowadays with the same frequency that they used to be in former days. This is both because there is less neglect on the part of patients in treating themselves for gonorrheal affections and because our treatment is more rational and more scientific than it used to be. But even now they are of greater frequency than they should be, and a stricture occurring in a patient who has been under a physician's treatment right along is a direct reproach to that physician. It shows that the treatment either was insufficient or incorrect; for, while we can not prevent epididymitis in every one of our gonorrheal patients, while we can not prevent prostatitis in every one of our cases, yet, stricture can be, and should be, prevented every time. We can not prevent the migration of the gonococci into various glands and neighboring organs, once they have invaded the submucous tissue of the urethral canal, but we can prevent the forming of connective tissue in every instance.

Organic stricture is a narrowing of the urethra, owing to the formation of bands of connective tissue in the mucous and submucous layers of the canal. This may be due to trauma (wound, injury)—such strictures being called traumatic—or to inflammation of the urethra. Of these inflammations, the most common one is gonorrhea. While a stricture may be produced by a nongonorrheal urethritis, still, it is so rare as to be virtually negligible. In fact, all possible causes of stricture pale into insignificance in comparison with the one great cause, namely, gonorrhea, which is the etiologic factor in about 80 or 85 percent of all urethral strictures.

Varieties of Stricture

A stricture that permits the passage of a No. 22 (French) bougie or sound is referred to as a stricture of wide caliber. Those that are so narrow that they will not permit the passing of a No. 22 or 20 (French) sound are spoken of as strictures of narrow caliber. A stricture that will permit the passage of only a filiform bougie is spoken of as a filiform stricture. A stricture that does not permit the passage of even a filiform sound is spoken of as an impermeable stricture, and such a one causes complete retention of urine. Strictures which are dilatable by sounds but immediately return to their former caliber, are referred to as resilient strictures.

Strictures may be single; but this happens rarely, except when of traumatic origin. When of gonorrheal origin, they generally are multiple. As a rule, two or three strictures are found in the same urethra; in exceptional cases, we may find as many as fifteen or twenty. Narrow strictures (imagine a thread tied around the urethra) are spoken of as linear; broader strictures (imagine a tape tied

around the urethra) are referred to as annular, ringlike. Multiple strictures, or broad annular strictures in which the lumen, instead of being in the center, is in the side of the constriction, and in which the entire passage becomes tortuous, are spoken of as tortuous strictures.

Strictures with which the general practitioner has to deal are fortunately most commonly located in the anterior urethra. Traumatic strictures generally are situated in the membranous urethra. There are no strictures —or so seldom as to be entirely negligible—in the prostatic urethra.

Symptomatology of Urethral Stricture

A stricture of wide caliber, or even of a somewhat narrow caliber, may present no symptoms of which the patient is aware. A patient may have a stricture for ten or more years without knowing it or without paying any attention to it, when suddenly, after a debauch or sexual excess or a cold, he is taken with complete retention of urine, and applies to the physician, the latter thereupon discovering a stricture of apparently many years' standing.

But as a rule strictures do cause symptoms. One of the commonest ones is the well-known gleet, which consists in a slight urethral discharge. The discharge is generally supposed to be most common in the morning; but this is so only because during the night the patient passes the longest time without urinating and in consequence the discharge can accumulate in sufficient amount to be noticed. But if the patient should abstain from urinating during the day for eight or nine hours we shall be sure to find the discharge then too. In fact, I have had a number of patients in whom the discharge in the morning was extremely scanty, so that it could be noticed or squeezed out only with difficulty, while toward evening, after the day's work, it was much more abundant.

The same thing was also true of shreds in the urine. While as a rule the shreds are much more numerous in the morning, this is only because of the longer time passed without urinating. And, just as the discharge may be more abundant in the evening, so the morning urine may virtually be free from shreds; while the evening urine, if the patient has abstained for several hours from urinating, may be full of them.

While a person may have gleet without a stricture, still, stricture is its most common cause, and in every case of obstinate gleet that refuses to heal under ordinary injections we should suspect stricture; and in the vast majority of cases examination will disclose it.

The next symptom is, a change in the size and character of the urinary stream. It is this that often brings the patient to the doctor. Besides being smaller in size than usual, the stream may assume a fantastic direction, going either to one side or downward, or become corkscrew-shaped, or—a very common occurrence—it splits in two or three different directions.

Then, almost invariably there is dribbling of the urine. The final contraction of the vesicourethral musculature is insufficient to drive out the last drops of the urine, owing to the obstruction met on the way, and they, therefore, dribble away simply by the action of gravity. Very often this little urine does not dribble away entirely, but remains, some in front, some in back of the stricture, thereby keeping up a low grade of inflammation.

Having to overcome an obstacle during each act of urination, the musculature of the neck of the bladder becomes hypertrophied, and, as is true for all unnaturally hypertrophied muscle, it becomes weakened. There is developed a low-grade inflammation of the neck of the bladder, besides more or less cystitis; and this increases the frequency of micturition—this being another important symptom of long-standing stricture. The patient may have to urinate every hour or every half hour during the day and several times during the night. The pain sometimes is slight, but may become so excruciating that the patient will double up.

In long-neglected stricture, there may be hypertrophy of the bladder-walls, well-developed cystitis, pyelonephrosis, pyelitis, and so on, but these are remote effects of stricture, and we are here concerned only with gonorrheal strictures as such.

Then, finally, there may obtain complete retention, with extravasation or infiltration of the urine, and also various fistulæ.

The sexual symptoms of stricture are important, because they are frequent, annoying, and often overshadow the urinary symptoms caused by the stricture. These symptoms are: weakened or imperfect erections, premature ejaculation, diminished voluptas during the act, a feeling of scalding or burning in the urethral canal during and after the ejaculation of the semen, and, occasionally, a disturbance in ejaculation. Regarding the latter, the semen either may fail to discharge outwardly at all, running back into the bladder, or it oozes out slowly after the erection has subsided. As a rule, there is a

diminished desire for intercourse, but occasionally, as so often happens in the inflammations around the posterior urethra and the prostate gland, there may be just enough inflammation to keep up an irritation that makes the patient believe that he is constantly erotically excited. This is a fictitious libido. In irritable stricture, pollutions occur frequently, also; and it quite often is here that we have to deal with retropollutions, or, ejaculation of the semen into the bladder.

Treatment by Means of Mechanical Dilatation

The treatment of stricture is mechanical as well as operative. The general practitioner seldom will have to have recourse to the operative method, as we can accomplish as good results, in the vast majority of strictures, by mechanical dilating.

Dilatation is performed by means of silk-woven bougies, steel sounds, and the various several-branched dilators. For strictures not admitting any more than a No. 12 or 15 (French) instrument, we use silk-woven bougies, because a very thin steel sound is apt to make a false passage. But for strictures above No. 15 lumen, we use steel sounds or dilators.

The greatest gentleness must be exercised in introducing a sound. Very much damage —aggravation of the inflammation, chills, septic infection, false passages, severe hemorrhages—has been caused, and is being caused, by physicians with too heavy a hand or who are too much in a hurry to accomplish results.

To introduce a sound properly, wash the glans and the meatus well with a 1 : 5000 mercury-bichloride solution, irrigate the portion anterior to the stricture with a 2-percent boric-acid solution, and, if you see the patient for the first time or you know that he is of a nervous disposition, instil in the neighborhood of the stricture a few drops of a 4-percent solution of cocaine or alypin and a few drops of a 1 : 1000 adrenalin solution. This latter measure not only takes away the pain to a great extent, but also makes the lumen of the constricted urethra larger and more patent, by removing the inflammatory swelling. Then lubricate the bougie (or, if it is a sound, pass it first through a flame, which sterilizes and warms it at the same time, then lubricate it with a sterile lubricant, oil being the best) and introduce it gently through the stricture.

Do not try to force the passage too much. Slight force is permissible, but not enough force to tear or divulse the stricture. Sometimes by waiting for a few moments, resting the tip of the sound at the opening of the constriction, a stricture which seemed to be absolutely impermeable will yield and permit the passing of the sound. This not only is true of spasmodic but also of genuine organic strictures, because most of them do possess a slight amount of dilatability.

After having introduced the sound, let it remain for five or ten minutes. I believe that passing the sound and taking it right out again is not sufficient. It is not only the momentary dilatation of the stricture that does good, but the more or less prolonged contact of the stricture-walls with the steel sound that produces the absorption of the scar tissue.

Always be sure to have the patient take a dose of 10 grains of hexamethylenamine about an hour before he comes to the office, and also 10 grains afterward. Many a case of infection and of urethral chills is avoided thereby.

The sounds may be introduced once every two or three days, while at each visit we may employ a larger-sized sound. It will be found that very often when we are unable to pass a larger-sized sound, we shall be able to do so if we first pass one of smaller size. In other words, suppose on Monday we pass a 24-size sound; if on Wednesday, we try to pass a 25- or 26-size sound, we may not be able to do so; but, if we pass again a 24-size sound, leave it in for a moment, then remove it and take a 25- or 26-size sound, the latter will enter easily. In this way, we continue the introduction of the sounds until we can pass easily a No. 30 or 32. Higher we need not go.

When we have reached the maximum, we may order the patient to come every two weeks or every month for an examination, so we can see whether the stricture has begun to recontract; and it is also a very good idea now to teach the patient to pass the sound himself. If he is intelligent and can be taught to use common sense and proceed aseptically, we can trust him to pass the sound once a month or once in two months and in this way avoid the danger of his stricture recontracting.

As to Dilators

The dilators introduced by Kollmann and Oberlander present a great advantage over the steel sounds, for they may be passed through a meatus as small as size 21 and then be dilated in the urethra to any extent we wish.

As most of the strictures that the general practitioner has to deal with are in the

anterior urethra, it is the anterior, or straight, dilator that he will have to use mostly.

The thin rubber sheath accompanying the dilators is slipped over the instrument, which thereupon is stretched to its full capacity in order to make sure of the integrity of the sheath. After it is closed again, it is lubricated with a sterile medium, then introduced into the urethra and dilated to the desired extent. The indicator on the dilator shows just the degree of dilatation. At each sitting the instrument may be dilated to two or three divisions higher.

There also are dilators on the market which can be used without rubber sheaths.

After the removal of the sound or the dilator, it is well to instil in the neighborhood of the stricture, a few drops of a 1-2-percent silver-nitrate solution, which acts both as an antiseptic and as a "healing" agent.

The Technic of Meatotomy

Some urethral meati are so small that they will not permit even the passage of a dilator. Such meati must be cut before we can expect to do anything with the stricture. While there are on the market numerous meatotomes invented by surgeons anxious to be immortalized by giving their name to an instrument, or by enterprising manufacturers, they are all superfluous. All that is necessary is a blunt-pointed bistoury.

Wash the glans and the meatus thoroughly with a 1 : 5000 mercury-bichloride solution. If you are very particular, irrigate the anterior urethra for about two inches with the same solution, or swab it out with a cotton swab saturated with it, and then insert into the meatus a bit of cotton dipped in a cocaine or alypin-adrenalin solution. Or, instead of the cotton, just a half grain of cocaine powder or crystals may be deposited on the floor of the meatus and about 5 drops of adrenalin, 1 : 1000, dropped in. After about three minutes, the floor of the meatus will seem to have become blanched.

You now introduce the bistoury and cut exactly in the median line on the floor of the urethra as far as you wish to have it cut. Supporting the floor of the meatus with one finger of the left hand will tell you just exactly whether and how far to cut. After cutting, pass a short anterior sound, to make sure that you have cut sufficiently. It is better to cut a little more than a little less, because there will be some recontraction upon healing. If cut exactly in the median line, there will be very little bleeding. If there is an abundant hemorrhage, compress the urethra *laterally* for several minutes or put a bandage around the glans, and the hemorrhage will stop.

Before sending the patient home, take a piece of a wooden applicator or a toothpick, wrap some absorbent cotton well around it, dip it in a 1: 1000 adrenalin solution, and insert it in the meatus. The patient removes it at the next urination.

Never cut on the roof of the urethra, as I have seen more than one physician do. It only cuts the glans without actually dividing the constriction, which is on the floor of the urethra.

Some meati have a tendency to reunite unless prevented from doing so, and this is prevented by passing a short steel sound several times a day, and by inserting between urinations a bit of cotton smeared with borated petrolatum.

When the little meatotomy wound is healed or about healed, then we begin with the introduction of sounds or dilators.

While the meatus should be cut sufficiently large to admit a No. 24 or 26 (French) sound, I see no reason for cutting it, as some do, to No. 32 or 34 size. There was an excuse for doing it before the introduction of dilators. It was necessary, in order to permit us to pass a No. 32 or 34 sound. But now, when we have the dilators with a caliber of 21 to 23 (French), it is not necessary to cut the meatus to much more than that. The excuse that the physician does not possess a Kollmann dilator and has only sounds, is not a valid one. He should purchase one. The patient's urethra must not be slashed merely because the physician does not possess a necessary instrument.

I am opposed to excessive meatotomies, not on purely sentimental or esthetic grounds, but because, in my opinion, they result in interference with proper urination, and quite possibly also with proper intercourse. When water issues from a tube of a narrow caliber but with a wide opening, it will splash, and people with excessively cut meati do not pass a uniform, strong stream of urine. I have had the impression that excessively cut meati are also a cause of premature ejaculation. I am, therefore, opposed to cutting the meatus to a size larger than No. 24 or 26. With our present dilators at command, it is unnecessary; and it may be injurious.

The Letters of Doctor Leonidas Playfair

Addressed to a Young Man Just Entering Practice

By A. H. P. Leuf, M. D., Philadelphia, Pennsylvania

EDITORIAL NOTE.—The difficulties of the young doctor! How many they are and how mountain-like they seem to the youngster; and how small and inconsequential they appear to us older fellows compared with the burdens we are bearing. However, let us give the boy a lift. He needs encouragement. Old Doctor Playfair understands the problems and aspirations of youth and can speak for us all.

Letter III. Office Hours

MY DEAR FRIEND: Pursuant to my promise in my last letter concerning office hours, I shall make that topic the main subject of this letter. First, however, let me express the hope that you have fully recovered from your late indisposition. I assume that your silence is not occasioned by a continuance of your trouble or its exacerbation, but that it is due, rather, to a proper activity on your part in securing office fittings, and—may I hope it—attending a patient—or several. But to the point.

One of the most important things that a young physician has to take into consideration is that of office hours. Practice divides itself into two parts: that which is done in the office of the doctor, and that done at the house of his patient.

Office work should be the more perfect, because here the physician ought to be surrounded with all the facilities for doing his best, which is seldom possible at the house of the patient, for self-evident reasons. Office work is the best kind in which a physician can be engaged. It is not so great a strain upon his vitality, consumes much less time, and is more remunerative despite the smaller fee. Encourage patients to come to the office rather than to ask you to visit them.

It is better to begin this way. The young doctor is too liable to be afraid to take a decided stand in matters of this kind. But, if he does not learn to insist upon having his convenience considered as much as possible at the very beginning of his career, he will find it increasingly difficult to do so as he becomes more busy.

Another important advantage of office practice over outside work consists in the fact that it may be continued long after you are too old and decrepit for the arduous work of visiting patients; and this applies with equal force to disabilities brought on by other causes than old age. One of the most pitiable sights in the profession is, to see the very old doctor, who has done so much incalculable good during his time, still compelled to endure the drudgery of general practice for the eking out of a mere existence.

This has always seemed to me a reflection upon his intelligence and business sense rather than a tribute to his greatness of heart. It is so very easy, as well as inexpensive, to credit all such with noble impulses, with generosity, and with all the other good traits that might be enumerated, when that is the only compensation granted them for the good they have done. It is cheap praise, succeeding oftener in paying doctors' bills than is supposed, but it is not convertible by him into a single one of the many things he needs for his comfort or existence.

For this reason, it is important for the doctor to be business-like from the very beginning of his career. He is either worth something to his patients or he is not. If he is, he should exact fair compensation for his services. If he is not, he should do one of two things, either become qualified or take up some other line of work.

The Early Office Hour

To return again to the subject of office hours. I should say that, as office work is the most important part of the doctor's labor, not only to himself but to his patients as well, it is desirable that he should arrange his office hours with this end in view.

First of all, he should consider carefully the strain upon his own vitality of the kind of practice in which he is about to engage. He should also take into consideration the habits of the community in which he lives, and particularly of that class that is likely to employ him at the beginning of his career—usually wage-earners, who form the bulk of our population. These people begin work early, and continue, as a rule, for from nine to eleven hours, one of these being devoted to the noonday meal. Evidently, a morning office hour is of no use to them, unless they are too ill to work and, yet, not enough so to be compelled to remain at home. But this

is not so with many. It is different with their wives and children. They can come in the forenoon, and should be induced to do so; mainly for the purpose of leaving an evening office hour free for those who are unable to come at another time.

The morning office hour should be regulated so that housewives can get some of their work done at home before going out, and, yet, so that they may return in time to begin the preparation of the noonday meal. Then, again, the doctor is obliged to take into consideration his own breakfast time, and allow himself an adequate interval between the conclusion of this meal and the beginning of his morning hour. This is for the purpose of enabling him to approach his work in the forenoon without undue haste, and in prime mental and physical condition to meet the trials and tribulations incident to his labors.

The Evening Office Hour

In the selection of an evening office hour, he should consider the time of his own evening meal, together with later evening engagements of any kind to which he may be bound. One of the most important of the latter is time for quiet study. Another consists in engagements of a purely social kind, in which every individual indulges more or less if of normal temperament. Then there are the medical-society meetings or the symposiums of several select friends, professional or otherwise.

Inasmuch as most wage-earners quit work at 6 o'clock, the evening hour should begin after this time. Yet, not so long after but that it may end in time to enable the physician to meet promptly the customary evening engagements. I say "promptly" with the utmost deliberation, for there is hardly anything that helps so much to inspire confidence in anyone's reliability as the reputation of being punctual.

Let me caution you against practicing the common childish deception of pretending to be so busy that it is impossible for you to be on time. If you are so busy, those who know you are bound to be aware of the fact, and your entire manner will certainly indicate it; for an active, energetic life leaves its unmistakable traces upon those who are subject to it. If you are not a busy man, those who know you will be aware of that fact too, and no puerile pretense will succeed in hoodwinking them. The necessarily evident result of such an attempt is to make you ridiculous, and this is fatal because it cheapens you.

On the other hand, if you are doing so well that, though you are not busy neither are you idle, you are making a living, provided you are businesslike. It is then not necessary to dissemble, for you are advancing and, with proper and legitimate care of your own affairs and attention to business, sure to develop these so that you soon will be busy. In other words, *never be a fraud;* for it is neither honest nor necessary, besides being positively harmful, both by injuring you in your own estimation and degrading you in that of others.

To return again to the evening office hour. As most individuals work till 6 o'clock and evening functions usually begin at 8, at many of which it is expected that everyone shall be present promptly at the hour appointed, your evening office hour should begin and end within this period. Consequently, I should suggest that the evening hour, in large cities especially, run from 6:30 to 7:30 p. m. The objection may be that the hour is too short, or that it begins too soon, or that it ends too early, to which I reply, however, that 6:30 p. m. is not too early for many people, while 7:30 p. m. is late enough for nearly everybody. For such as may find it impossible to come to you within this time, it is an easy matter to extend your hour as may be mutually agreeable. With such an arrangement, you will almost always know when you are going to be late and can say so in advance, or you can change your special engagement, if that is convenient.

Insistence Upon Schedule Time

When very busy, you will find more people enter your waiting-room within this single hour than can be seen in so short a time, a condition of affairs much to be hoped for, and for which you should be thankful when it arrives. Though they may take up your time till 9 o'clock, you have no ground for objection so long as they all come within your hour, but I should vigorously and, if necessary, peremptorily discourage the arrival of patients after office hours, except by special appointment. My reason for this admonition is, that, if you do not interdict practice of this kind, you will find patients coming to your office an hour or an hour and a half after the end of your regular office hour, presuming upon your being made busy by preceding comers, and because they are not willing to wait their turn. This makes it impossible for you to foretell when you are going to be done with your evening work, and, therefore, at what time you can be present elsewhere or be able to begin some other labor.

It is better, even in the earlier years of practice, when one is not so busy, to get into the habit of refusing to see people who come after the end of the fixed office hour. Of course, it is not wise to do this in an objectionable manner. It will not do to have late patients told that you are in but refuse to see them. They never would forgive you for doing that; and you cannot afford to get into their bad graces, particularly early in practice. It is better to avoid them by being away from your office. Leave within a few minutes of the end of your office hour and do not return for an hour or more later. That enables those at home to say truthfully that you are not at home to see the patient, that you seldom are at home immediately after an office hour, and that the only time to see you there with any certainty is at the time fixed by yourself for this purpose.

To concentrate your work during an office hour, it sometimes is advisable merely to specify the beginning of the hour at which you are ready to begin to see patients, as, say, 8 o'clock, when your hours are from 8 to 9. It is also well, after getting busy, to have a sign conspicuously placed in your waiting-room, to the effect that there are no consultations outside of office hours except by special appointment. To this may be added a companion sign stating that you cannot agree always to make visits upon the same day when the call is made after you leave your office in the morning. While rigidity in these matters undoubtedly is costly at times, it is the only wise, and the most profitable, course in the end.

Never fail to keep your office hours, for it is unpardonable for you almost to bully your patients into coming at a time set by yourself and then not be there to meet them.

Afternoon Office Hours

In regard to afternoon office hours, I have only to say that they are bad for the general practitioner; and I hardly can see where they are of much use even to the specialist, although I recognize the fact that many wealthy people, particularly women, are in the habit of retiring—I was going to say, late at night, but it is more accurate to say, early in the morning, and arising at about noon. Of course, if they visit you soon after breakfast, it will be some time in the fore part of the afternoon, as they have their breakfast in the middle of the day.

These people constitute desirable patients, because they can more readily afford to pay a large fee than most people can spare a smaller one. However, if your work has been so good as to attract them, they are anxious enough to see you to come during your office hour. There is nothing to prevent them from coming at any time except their own indolence—a trait that it is not your business to encourage, but which it rather is your duty to end if you can.

Those of your patients who are deserving of the greatest consideration are the ones who can least afford to pay you for your work, those whom the interests of life compel to drudge along during the better part of the waking-hours to eke out a mere existence. These are the people who will help you to live, who will make your living pleasanter, who will appreciate what you do for them, and who cannot see you except at the hour suggested without making an undue sacrifice. I should, therefore, say that the wealthy need not concern you so far as arranging your office hours are concerned. Should they, however, insist upon seeing you at a particular time, this may be arranged, but only in consideration of a special fee.

It is also well to bear in mind, in the arrangement of office hours, that it is the steady pace and worry that kill. The practicing physician needs periods of rest as well as do all other individuals. There is no time so appropriate to begin doing this as at the beginning of your career. Just as workingmen and business men have their days off once a week, which by common practice is Sunday, so would I also suggest that you select that day for your day of rest, to which may also be added all legal holidays.

Few will begrudge you this respite, and there are many who will place it to your credit, on the assumption that you are religiously inclined, because you have no office hours on Sunday. For the reason that a physician is blamed for many things that are not his fault, it is excusable to reap the benefit of this interpretation, whether merited or not. You need not, therefore, enlighten those who mistakenly—should it so happen—attribute your refusal to work on a Sunday to religious motives. As you grow busier, a time will come when a Sunday rest will be as welcome as it will be impossible to get should you have neglected to make this arrangement earlier in your practice, for it is exceedingly difficult to break up an established habit that you have helped your patients to form.

When you finally become very busy, you will, provided you are an attentive collector, be able to secure whatever help may be neces-

sary to lighten your labors and save a corresponding amount of time. There are few people so situated that they cannot see a doctor some time during the week, but for the few who cannot you may make special arrangements for Sundays and the holidays on which you have no office hour.

Were you located in the country, I should lay less stress upon the subject of office hours, for there your outside work would necessarily make the control of your time more uncertain. You would have greater distances to travel, and you would often have to make a longer stay than with a like case in the city, because you could not so promptly return. You would have to go over your patient very carefully at each visit, and leave explicit instructions as to what to look for and what to do until your return.

If at all busy, the country practitioner cannot see distant patients oftener than once in twenty-four hours. In sparsely settled districts he can see them only at intervals of several days, there being no other nearby physician, and the attendants must be thoroughly instructed in the mysteries of the craft according to the needs of the patients and their ability to absorb instruction. Until your next visit, you leave the sufferer in the hands of fate.

To such a man, office hours are an abstraction—an etherialization. At best, the doctor's time in country practice is so cut up and uncertain, because of the wide distribution of his patients, and poor traveling facilities, that he is never sure of his time at home. Yet even for him, a morning and evening hour is the best, somewhere near his corresponding meal hours. His office callers will patiently wait until he finishes his meals, for life goes more leisurely in the country, and time is less valued than it is in the city.

It is also well to bear in mind that a short office hour concentrates your work. Patients come closer together, are more apt to see one another, and are more likely to be imbued with the idea that you are in demand than if the same number were distributed over twice the time or a longer period.

After having equipped your office, and fixed upon your hours, you are ready to begin work in earnest. The question then arises whether you should supply the medicines you wish your patients to have, or let the pharmacist do this on your prescription. That is a most important matter, and requires rather lengthy discussion, on which account I shall not take it up now, but will defer it to my next letter, in which I shall consider it from every side. Meanwhile, believe me, with sincerest well wishes,

Your true friend,

LEONIDAS PLAYFAIR.

GIFTS

If with pleasure you are viewing any work some man is doing,
If you like him or you love him, tell him now.
Don't withhold your approbation, 'till the Parson makes oration,
As he lies with snowy lilies o'er his brow;
For no matter how you shout it, he won't really care about it,
He won't know how many tear-drops you have shed;
If you think some praise is due him, now's the time to "slip it to him,"
For he cannot read his tombstone when he's dead.

More than fame and more than money, is the comment kind and funny,
Or the hearty warm approval of a friend.
For it gives to life a savor and it makes you stronger, braver,
And it gives you heart and spirit to the end;
If he earns your praise, bestow it, if you like him let him know it,
Let the words of true encouragement be said,
Do not wait 'till life is over, and he's underneath the clover,
For he cannot read his tombstone when he's dead.

Then the joy of rightful living is not always in the giving
Of the costly gifts which break your pocket flat.
But a word of cheer when spoken is often just the token
That will mean far more than gifts. There's truth in that.
Just take out the streak of yellow, don't condemn the other fellow
If his views of life don't gibe with what you've said;
Just remember he's our brother in this world as in the other,
For he cannot read his tombstone when he's dead.

The Action of Sparteine

A Reply to Dr. Leslie B. Wiggs

By George E. Pettey, M. D., Memphis, Tennessee

WHEN there is difference of opinion between authors or clinical observers as to the physiological effects of any remedy, it is not always easy to determine which opinion is the correct one; for the reason that the human system is a very complex organism, and, while a remedy may be known to make a certain therapeutic impression, still, its effect may not be such on any vital organ as to make it easy or even possible to measure instrumentally and verify that effect. However, that is not true of all of our therapeutic agents.

Sparteine is one as to the effects of which no difference of opinion should exist, yet in the works on therapeutics the widest difference of opinion is expressed both as to its efficacy and its physiological action.

In making a study of the subject some years ago, the writer came to the conclusion that these differences of opinion arose mainly from a misunderstanding of the size of the dose. The adult dose was stated by different authors at from 1-10 grain to 2 grains, but a majority of the writers placed the dose at 1-5 of a grain or less. It was found that virtually all of those who held to the fractional-grain doses expressed little confidence in the remedy; in fact, most of them held it to be of questionable value, if not inert.

On the other hand, those who placed the dose at from 1 to 2 grains expressed great confidence in its efficacy both as a heart tonic and diuretic.

Among those holding the latter opinion was Bartholow, who said that "it above all other remedies deserved to be classed as a heart tonic."

About twenty years ago, this statement of Bartholow's attracted the writer's attention, and the use of sparteine, in 2-grain doses, was then begun.

For a few years, the remedy was used empirically with more or less indefinitely defined purpose; but, the author's work becoming such as to demand frequent use of the most dependable heart tonic available, an independent study of remedies reputed to be cardiac tonics was undertaken. This resulted in the selection of sparteine as the remedy which met the requirements most fully and which was most free from untoward or objectionable effects.

Some writers class sparteine with digitalis and attribute to it similar effects on the circulatory system; but this is an error. While sparteine exerts equally as tonic an effect on the heart-muscle as does digitalis, its influence on the arterial system, especially on the arterial capillaries, is directly the reverse—digitalis being a vasoconstrictor and sparteine a vasodilator.

About eight years ago, the writer published the conclusions reached by him in his study of sparteine, which were as follows:

"Sparteine, in medicinal doses, is practically a nontoxic drug.

"The effective therapeutic dose is 2 grains, and that quantity is required at intervals of four to six hours to establish and maintain the full physiological effects of the remedy.

"It is a reliable, nonirritating diuretic, suitable for hypodermic use.

"It is our most prompt and most dependable cardiac tonic, and one which is free from objectionable by-effects. It adds tone to the heart-muscle and increases the force of its action, while at the same time, by dilating the arterial capillaries, it reduces the resistance against which the heart is called upon to propel the blood. It is a true heart tonic."

The Experiments of Doctor Wiggs

Recently Dr. Leslie Byron Wiggs,* as a result of the laboratory study of the action of sparteine on the hearts of *frogs* and *dogs*, has announced conclusions differing radically from the above, as well as from the views held by a large number of competent clinicians who have made extensive use of sparteine in the treatment of diseases.

Doctor Wiggs says: "To answer the assertion of various authors who state 'that they have proven to their satisfaction the value of sparteine in clinical practice,' it was determined to see how far this could be proven in the laboratory."

As the result of these experiments, he reached the conclusion that sparteine "depresses the cardiac action," that it "markedly

*Read before the Tri-State Medical Society of Mississippi, Arkansas and Tennessee at Memphis, November, 1914.

*The Old Dominion Journal of Medicine and Surgery, May, 1914.

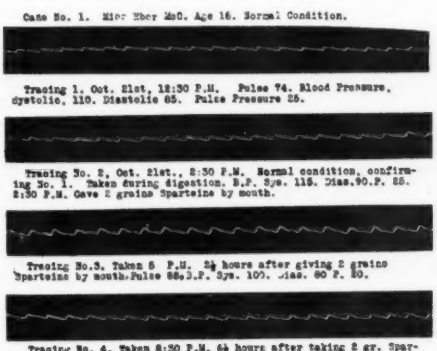
diminishes the heart tone," and that it has "no diuretic action."

As these conclusions were reached by laboratory experiments on frogs and dogs, it seems to the writer that, in justice to himself as well as to those who might be influenced by his conclusions, the Doctor should have said that "sparteine has no diuretic action" on *dogs*. Had he stated his conclusion as to the diuretic action of sparteine thus accurately, his finding doubtless would have been accepted as final. When, however, he makes the broad and unqualified assertion as applying to human beings, we cannot allow the statement to pass unchallenged.

Inconclusive Value of Animal-Experiments

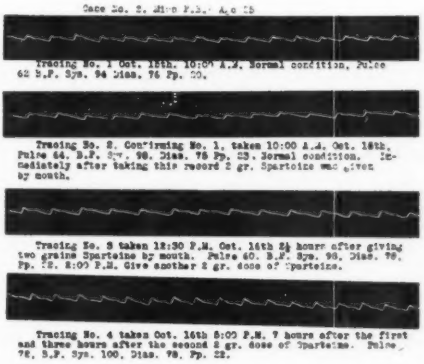
Too many careful and competent clinicians have observed the diuretic action of sparteine to allow a few laboratory experiments on the lower animals to shake their confidence in facts to which their own senses bear witness.

Notwithstanding Doctor Wiggs's conclusions, the writer, from abundant clinical ex-

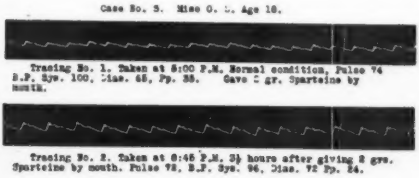

Case No. 1. Miss Eber Med. Age 16. Normal Condition.
Tracing 1, Oct. 21st, 12:30 P.M. Pulse 74. Blood Pressure, Systolic, 110. Diastolic 65. Pulse Pressure 25.
Tracing No. 2, Oct. 21st., 2:30 P.M. Normal condition, confirming No. 1. Taken during digestion. B.P. Sys. 115. Dias. 90. P. 25. 2:30 P.M. Gave 2 grains Sparteine by mouth.
Tracing No. 3. Taken 5 P.M. 2½ hours after giving 2 grains Sparteine by mouth. Pulse 88. B.P. Sys. 100. Dias. 80 P. 20.
Tracing No. 4. Taken 8:30 P.M. 6½ hours after taking 2 gr. Sparteine by mouth. Pulse 80. B.P. Sys. 110. Dias. 90 Pp. 20 Taken during digestion.

perience, still insists that sparteine, when administered to a human being, acts as a diuretic. Whether it has or has not diuretic action on dogs, he does not pretend to say. However, it is not with this part of Doctor Wiggs's article that this paper is intended to deal, but rather with that part relating to the effect of sparteine on the cardiac function.

Doctor Wiggs asserts that "sparteine depresses the cardiac function, causing a diminution in the tone," and that, "from experimental evidence, it therefore seems that the proper classification of sparteine is along with gelseminine and coniine, and that in conditions of failing heart-power the administration of sparteine is contraindicated." Further: "If recovery takes place in these conditions after the administration of sparteine, it is probable that the good result came not through beneficial influence of the drug, but rather in spite of its harmful action."

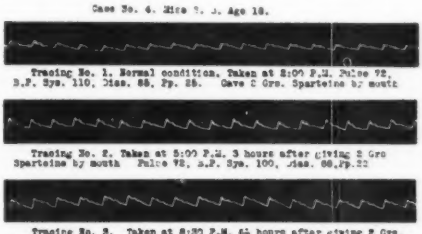

Case No. 2. Miss M.L. Age 18
Tracing No. 1 Oct. 15th. 10:00 A.M. Normal condition. Pulse 62 B.P. Sys. 94 Dias. 76 Pp. 20.
Tracing No. 2. Confirming No. 1, taken 10:00 A.M. Oct. 16th. Pulse 64. B.P. Sys. 98. Dias. 76 Pp. 23. Normal condition. Immediately after taking this record 2 gr. Sparteine was given by mouth.
Tracing No. 3 taken 12:30 P.M. Oct. 16th 2½ hours after giving two grains Sparteine by mouth. Pulse 60. B.P. Sys. 98. Dias. 76. Pp. 22. 2:00 P.M. Give another 2 gr. dose of Sparteine.
Tracing No. 4 taken Oct. 16th 5:00 P.M. 7 hours after the first and three hours after the second 2 gr. dose of Sparteine. Pulse 78. B.P. Sys. 100. Dias. 78. Pp. 22.

The writer does not wish to be understood as denying the value of experiments on the lower animals in studying the action of drugs, for, in many instances such experiments have furnished a reliable index to their


Case No. 3. Miss O. L. Age 18.
Tracing No. 1. Taken at 5:00 P.M. Normal condition, Pulse 74 B.P. Sys. 100, Dias. 65, Pp. 35. Gave 2 gr. Sparteine by mouth.
Tracing No. 2. Taken at 8:45 P.M. 3½ hours after giving 2 grs. Sparteine by mouth. Pulse 72, B.P. Sys. 96, Dias. 72 Pp. 24.

action on man; still, there are too many exceptions to this general rule for us to accept the result of such experiments as final. The crucial test, after all, is the administration of the remedy to man.

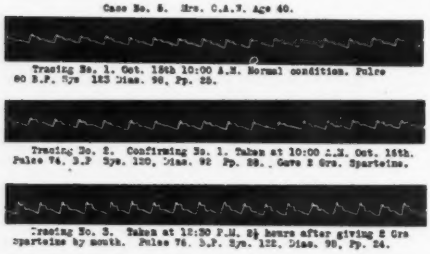
In studying a remedy such as the one in question, there seems to be no good reason


Case No. 4. Miss T. J. Age 18.
Tracing No. 1. Normal condition. Taken at 2:00 P.M. Pulse 72, B.P. Sys. 110, Dias. 88, Pp. 22. Gave 2 Grs. Sparteine by mouth
Tracing No. 2. Taken at 5:00 P.M. 3 hours after giving 2 Grs Sparteine by mouth Pulse 72, B.P. Sys. 100, Dias. 80.Pp.22
Tracing No. 3. Taken at 8:30 P.M. 6½ hours after giving 2 Grs. Sparteine by mouth. Pulse 76, B.P. Sys. 110, Dias. 88, Pp. 22. Supper at 7:00 P.M.

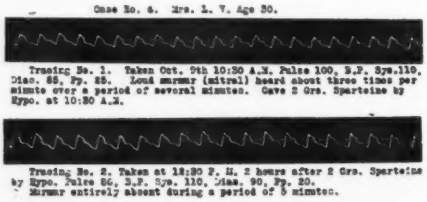
for introducing an element of uncertainty into the equation by using lower animals instead of human subjects as clinical material—since the latter can be had in abundance. The

writer has utilized the human instead of the animal subject.

While the writer has had abundant experience in the use of sparteine in the treatment of disease and does not feel that he could now be mistaken as to its effects when administered to persons in a pathological condition, he has not had occasion to study its action on normal individuals; but, since Doctor Wiggs calls in question the generally accepted teaching with reference to its action, the writer has made a study of the action of the remedy on the cardiac function of normal individuals, and he presents herewith the record of such study.


Case No. 8. Mrs. C.A.V. Age 40.
Tracing No. 1. Oct. 18th 10:00 A.M. Normal condition. Pulse 80 B.P. Sys 183 Diss. 98, Pp. 28.
Tracing No. 2. Confirming No. 1. Taken at 10:00 A.M. Oct. 16th. Pulse 74. B.P Sys. 130, Diss. 92 Pp. 38. Gave 2 Grs. Sparteine.
Tracing No. 3. Taken at 12:30 P.M. 2½ hours after giving 2 Grs Sparteine by mouth. Pulse 76. B.P. Sys. 122. Diss. 98, Pp. 24.

The above record, which can be readily verified by any competent observer who will take the trouble to do it, makes it clear that sparteine *not only does not depress the cardiac muscle of a human being, but, on the contrary, it acts as a positive and powerful tonic to it.*


Case No. 6. Mrs. L. V. Age 30.
Tracing No. 1. Taken Oct. 9th 10:30 A.M. Pulse 100, B.P. Sys.110, Diss. 68, Pp. 38. Loud murmur (mitral) heard about three times per minute over a period of several minutes. Gave 2 Grs. Sparteine by Hypo. at 10:30 A.M.
Tracing No. 2. Taken at 12:30 P. M. 2 hours after 2 Grs. Sparteine by Hypo. Pulse 86, B.P. Sys. 110, Diss. 90, Pp. 20. Murmur entirely absent during a period of 5 minutes.

Taking the findings of Doctor Wiggs as to the effect of sparteine on the cardiac function of frogs and dogs as a criterion, it is evident that the effect of this drug on man and animals is not the same, in fact, that the one is directly the opposite of the other. This seems to call for greater caution on the part of laboratory workers in announcing conclusions based alone upon animal experimentation. Such conclusions should not be announced as ultimate truth until they have been verified by actual tests on man.

Cosmetic Surgery

By Ralph St. J. Perry, M. D., Minneapolis, Minnesota

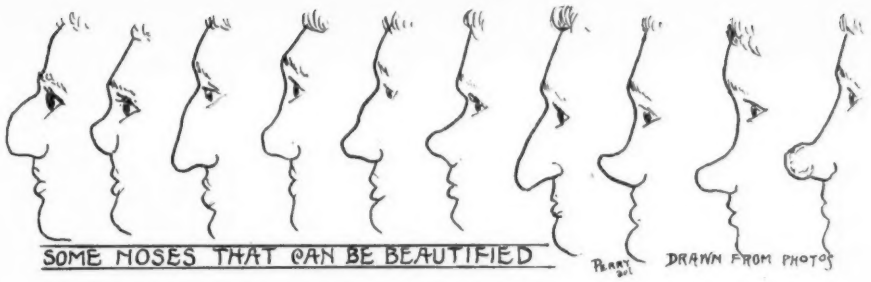
EDITORIAL NOTE.—This article is the first of a series upon the topic of "Cosmetic Surgery," which Doctor Perry is preparing with special thought to the interests of the general practitioner. These papers promise to be of exceptional interest.

A SHORT time ago, in a conversation with a physician, I chanced to remark that I was doing considerable cosmetic surgery. Said he, "What is cosmetic surgery?"—a question which covers the attitude of many members of the profession.

Cosmetic surgery includes the treatment, removal, repair, and restoration of disfigurements, deformities, and defects of the face, neck, bust, hands, and feet; being a combination of dermatology and orthopedics applied to the visible parts of the body, and involving so much of internal medicine, gynecology, and rectal and genitourinary surgery as may, through reflex influences, affect the skin. From this definition, it can be seen that no tyro in medical or surgical work or any "mushroom" specialist who lacks experience in general practice, can successfully cope with the many and varied problems presented to the cosmetic surgeon.

As a matter of fact, it is surprising that there should be such a widespread indifference in the medical profession concerning this branch of surgery; for, in every city there are those who aspire to be beautiful or who would gladly be rid of some disfigurement that mortifies them or which acts as a drawback in business affairs. And because of their inability to get relief at home they hie themselves to the advertising "specialist," who, oftener than not, is not properly qualified for the work or perhaps resorts to makeshift methods that produce merely temporary results.

This love of the beautiful, and the desire to attain it, dates back to prehistoric times, and our earliest medical and religious literature contains frequent references to cosmetic procedures and surgical operations intended to beautify by remedying some disfigurement. Centuries before our Christian era, the oriental surgeons were rebuilding and restoring cutoff



noses. Celsus has told us how to cover up unsightly scars; Taglicozzi created a furor by duplicating in Bologne the rhinoplastic work of the orientals. During the years of the Dark Age, it seems that many minor infractions of the law were punished by slitting or cutting off the nose or ears, hence, the demand for the reparative operation.

And yet, in spite of the demands of the people and in spite of the antiquity of this calling, the attitude of many of the medical profession is that of tolerance or even ridicule, largely owing, I believe, to an incredible and lamentable sciolism. Because of this attitude, many men have hesitated to announce themselves as cosmetic surgeons, so that the field has been left largely to the adventurous advertising gentry. Pick up the Sunday edition of almost any metropolitan newspaper, and you will find from one to twenty advertisements similar to the one reproduced in this article. These advertisers draw many of their patients from our territory—mine and yours—because the general practitioner or the specialist in major surgery considers cosmetic work too insignificant to take notice of. In my card index I have this day listed 534 conditions calling for cosmetic operations, and every week or two a new one is added.

When one looks back three or four centuries and sees the wonderful results accomplished by surgeons who were innocent of anatomical knowledge, who knew naught of antiseptic and aseptic methods, who worked with crude instruments and material, and under most adverse general conditions, one cannot help but hope for better results, in view of all of our anatomical learning, our aseptic technic, our delicate instruments, excellent material, and propitious surroundings.

What Cosmetic Surgery May Accomplish

The object sought in any cosmetic operation is, the elimination of a disfigurement, deformity or defect. The success of the operation depends upon the following factors:

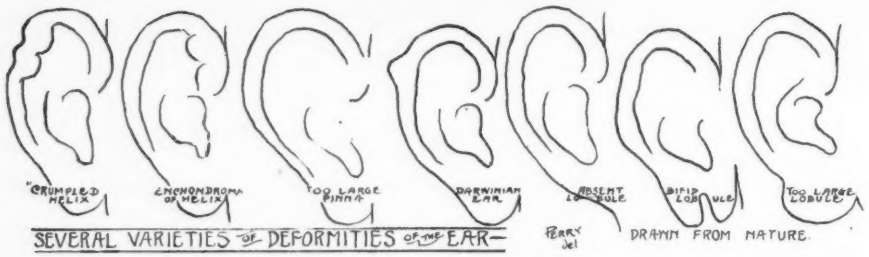
1. The anatomy of the parts involved.
2. The cause of the disfigurement or deformity; whether congenital, or following disease or traumatism.
3. The nature and condition of the tissues involved.
4. The general health of the patient.
5. The skill of the surgeon.
6. The conditions influencing recovery.
7. The willingness, patience, and endurance of the patient.

Inasmuch as the cosmetic effect is purely a matter of surface—external or visible results—the minute topographical anatomy of the parts comes into consideration. The surgeon must know the various lines, furrows and

ATTRACTIVE FEATURES
No matter who you are, what you are, and whatever your calling or station in life, you will be happier by making the best of your looks. Whether by inheritance or birth, or as a result of indiscretion or accident, life with deformities and relatives, and stran-

wrinkles, the rugæ, prominences and eminences, the muscular action which causes them, the cutaneous conditions which permit of their formation and the osseous and cartilaginous foundations thereof. Normal lines and furrows are useful in hiding scars following incisions; abnormal ones are to be prevented or removed.

Coupled with this anatomical lore, should be a knowledge of the pathology of the tissues, if any, and the ability of the tissues to respond to surgical encouragement toward repair and reconstruction; and, if these tissues are incapable of operating in harmony with the surgeon, then to what extent can they be eliminated and others substituted for them.



Thus, we see that in addition to a knowledge of anatomy, physiology, histology, and pathology the cosmetic surgeon must be familiar with the principles and practice of subcutaneous and plastic surgery and tissue grafting, and with those chemical and therapeutic agents which will destroy or build up certain tissues. All instruments and materials employed should be such as will leave the smallest possible trace of their use. The surgeon should have a "mechanical knack" that will aid in the devising and application of impromptu methods and appliances to meet emergencies or peculiar conditions encountered in individual cases.

How to Get the Knowledge

Some of this knowledge can be acquired from the text books and works of reference in vogue, but no one volume contains it all, or even half, for the bulk of it is so widely scattered through our literature that it is quite a task to collect it. The operative work calls for dexterity and a well-developed sense of form and size, the ability to secure perfect coaptation and to secure union by first intention. Tissues are to be handled as little as possible, and then with the greatest gentleness; for bruising, crushing, and pinching are fatal to cosmetic results. Hemorrhage must be prevented as much as possible and all coapted surfaces cleansed of clots, for extravasated blood offers a site for infection, followed by a destructive suppuration.

Singularly enough, one of the greatest obstacles to success in cosmetic work is the patient, who is most anxious for a successful result but whose anxiety gives rise to a decidedly detrimental impatience and curiosity; whose hopes, built high but weak, cannot withstand the shock of an incomplete first operation; whose stamina is such that a failure to secure an immediate result brings on a complete collapse of courage. For these reasons, it is always best that the patient have a preoperative understanding, as to just what procedures may probably be necessary and just what adverse ones are possible—even if not probable.

Now let me call attention to some of the possibilities of cosmetic surgery.

Some of the More Obvious Possibilities

Probably the most conspicuous feature of the face is the nose, and here we find many conditions which can be remedied by the cosmetic-surgeon's art.

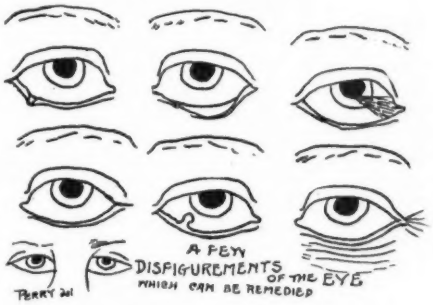
Deviations from the median line, either partial or of the entire organ, may be the result of disease or of trauma, and as a rule are easily corrected by operations performed either within the nose or subcutaneously, and, thus, leave no scars. There also are unsightly variations in the linear contour of the nose, such as the concave, or "saddleback," or "swaybacked"; the spatulated; the "baseball," or "pugilist's" broken nose; the convex, or Roman (which has been designated by many cognomens), the turned-up, retroussé, or "snub" nose; the turned-down, or "frog" nose; besides numerous other varieties. The nose may be unusually elongated or too much foreshortened; the tip may be bulbous, split or too sharply pointed; the entire organ may be too large, too small or may be absent entirely. All of these, and many more, unshapely or misshapen conditions can be remedied.

The ears frequently are the object of much solicitude because of their size, shape or relative position on the head.

Outstanding ears can be made to lie close to the head; a buckled or crumpled pinna can be straightened out, and auricles which are too large or unsightly in any part or as a whole are amenable to otoplastic procedures. Many persons who are the innocent possessors of ears showing marks of alleged degeneracy are anxious to have these stigmata removed, and their desires can be satisfied by any cosmetic surgeon.

Then there are the eyes, "the windows of the soul." These may suffer from internal or from external strabismus, from pterygium

or other kind of growth; there may be cicatricial contractions, eutropion or ectropion, or destruction of a part or all of an eyelid. The eyebrows may be deficient or defective; ptosis, epicanthus, ankyloblepharon, "crow's feet," "baggy" lids, asymmetry of the palpebral fissures, dacryocystitis, as well as other unsightly conditions may detract from one's beauty. All of the abnormalities just enumerated and many others, can be overcome by means of plastic methods.

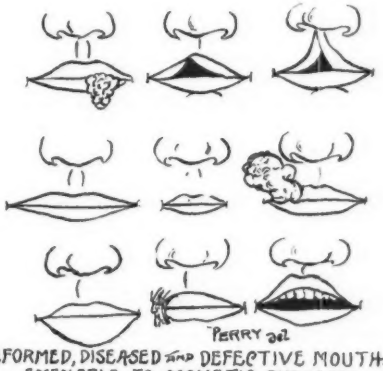


In the region of the mouth, we have harelip, thick lips, short upper lips, too full lips, the too small or too large mouth, clefts due to defects of fetal development, cicatricial contractions, and numerous other disfigurements. Within the oral cavity there are presented dozens of possibilities for cosmetic work along dental lines, prosthetic and otherwise. The tongue presents several conditions which detract from one's good looks or accentuate some idiosyncrasy, and which can be improved by treatment.

The hair, the forehead, the cheeks, the chin, and the neck are all subject to anomalies and abnormalities offering opportunities to the cosmetician. The feminine bust has, for many a moon, been exploited by the advertising fraternity as a most beautiful field for development. And, while their results have been more auriferous (to the benevolent promoters) than areolar and adipose, there is no doubt but that by proper methods the defective, deformed, deficient or diseased breast can be made to take on most attractive features. The arms and hands frequently present disfigurements which it is desirable to have removed, such as scars, tattoos and birthmarks, tumor growths, cicatrices and webbed and contractured fingers. In the performing of amputations of fingers, much can be done to render the resulting mutilations less conspicuous by following the suggestions laid down by the author in a series of articles published in this magazine in 1910-1911.

While the nether extremities generally are hidden from the public gaze, there are a few pedal afflictions, such as bunions and club foot, for example, which are obvious even through shoe-leather; besides others—corns, hammertoe, painful calluses, and so on—which cause ungainly alteration of the gait.

This category of cosmetic possibilities might be prolonged indefinitely, but it hardly is necessary, for you can find many cases within your own knowledge where some patient, friend or relative has some defect, deformity or disfigurement that could be removed or corrected. A suggestion to these individuals may cause them to seek relief, for most of them are ignorant of what can be done to improve their appearance, and only a few are so indifferent as not to care about their appearance.



DEFORMED, DISEASED AND DEFECTIVE MOUTHS AMENABLE TO COSMETIC SURGERY

The details of the treatment of these many afflictions will be left to other articles that will follow.

801 Pillsbury Building.

(To be continued)

Cavia Cobaya: Medical Martyr

The Guinea-Pig, and What We Owe Him

By B. G. R. Williams, M. D., Paris, Illinois

Director, The Wabash Valley Medical Laboratory; Author of "Laboratory Methods for the General Practitioner."

EDITORIAL NOTE.—It gives us great pleasure to announce that Doctor Williams has promised us, for early publication, a new series of articles to be entitled: "Lens, Reagent, & Company, Detectives." We hope to print the first of these in our March issue. They will be written in story form, but will be found as practical as they are interesting, while showing the value of the laboratory aids in diagnosis and treatment.

PIGS is pigs," but the guinea-pig is interesting for what he is not. He is not a pig and does not come from Guinea. Very little has been written upon the guinea-pig and his part in modern medicine, each worker being compelled to a certain extent to gain his knowledge of this little animal, his habits and his life's history, by experience. In our medical-laboratory work, we have made a number of observations which may prove interesting to almost every physician and useful to the few who in the future may come in practical contact with them.

Before you and I began the study of medicine, we had not heard of the guinea-pig. Even now, after talking and writing about him or working with him, we know but little more. The cavy, that is, the guinea-pig, is a rodent very closely related to the rabbit. He is believed to have been introduced from South America, more especially from the Guianas. His ancestors, like himself, are of 1001 different varieties; none of the tame varieties, though, may be found in the wild state. The latter—the wild ones—are all gray or brown, never colored; and their habits vary exceedingly from those of the domesticated guinea-pig. Inasmuch as colored guinea-pigs were brought to Europe upon the discovery of America, it is presumed that they came from some that had been domesticated by the native Indian tribes.

The Guinea-Pig's Lack of Intelligence

Perhaps a guinea-pig means right. But even with the close study I have given them, it is difficult for me to understand why the critters are so foolish. Asked the question, "Which has the most sense, a chicken or a guinea-pig," a breeder considered for a few puzzled moments and then replied, "Well, it isn't a question so much as to which has the most, as it is *which has the least.*"

I agree. Stated algebraically, the amount of intelligence, quantity x, in a chicken may be expressed as zero. Quantity y, that of the guinea-pig, may be expressed as minus 1000. The brain of the guinea-pig cannot possibly contain neurones, but merely connective tissue, cicatricial at that. It is a creature of reflexes, a restless rat, a squealing and scurrying tissue-mass. A chicken will learn to eat out of your hand: a guinea-pig always mistrusts you. I raise chickens and guinea-pigs together, for the former do not hold against the latter their mental shortcomings. Any self-respecting hen will ignore a guinea-pig as she would a stone. Even young roosters and pullets learn the lesson early. Put a rat in a labyrinth and his food outside, and he will quickly work to it; very much more quickly the next time. With a guinea-pig, not so; if he reaches the food it will be by accident, nor will he gain anything by repeated practice.

What I shall have to say just now may have something to do with the property of inertia, upon which I shall dwell later. Many of these things may depend upon a peculiar error of refraction in the cavy, though I fail to find any information on this point. He appears to be able to see at a distance what escapes his vision under his nose. At any rate, when food is thrown to him he squeals and runs—runs in whatever direction he is headed. If the food lies in his path, he runs over it without paying the least heed to it. Then he stops, turns, squeals, then takes another scurrying flight. As he nears the dainty morsel, each flight becomes somewhat shorter. Finally he stops short at the food. A female will grunt contentedly and begin to nibble. A male, when associated with females, will continue to squeal for more food. But the impression is gained that he has found the food, not by the sense of sight, but by the olfactory or some other sense. And, yet, he can perceive a threatening movement from the distance.

A guinea-pig likes to have his back rubbed—that is, after you have forced him to have it rubbed. If you can succeed in catching and holding him in order to demonstrate the process, he may continue to lie still, apparently

enjoying it. Cease for a moment, and he is gone.

Next to the physician, the guinea-pig is nature's best example of inertia, not only with regard to the finding of food, but in many other life habits. Not only is this an inertia of motion, but of position. A guinea-pig hesitates to start on the run, but, once running, knows not when to stop. A young rooster approaches Mr. Pig with feathers on end. Pig nibbles contentedly and blinks at Mr. Rooster. Does he see him? Stage of hesitation? Mr. R. is puzzled, turns his head sideways and thinks it over. Feathers become more perpendicular. Nerves himself to peck. Pecks. Misses guinea-pig, who runs suddenly and keeps running for a goodly length of time. Finally stops as shortly.

Here we are criticizing the guinea-pig, while we physicians show some of the same characteristics. We may not squeal so loudly, not eat so voraciously, not breed quite so rapidly, but, we do show the property of inertia—slow to move into new ways of thinking; yet, once set agoing, we never know when and where to stop.

The Cavy Is a Great Coward

Does a guinea-pig show fear? He is not afraid of the devil himself. Yet, of all animals, the guinea-pig is the greatest coward. Again we may be dealing with a peculiar refractive error. Lie motionless upon the ground, and he will crawl over you. Place a motionless snake on the ground, and he will sleep in its coils. And, yet, a slightest movement near him terrifies him. There can, surely, be no mental anguish quite as great as that of the guinea-pig's picked up by the hand; and, it seems to me, it could scarcely be increased by any physical pain resulting from experimental work. Stroke him tenderly or pierce him with a needle, it is the same: squirming and kicking, eyes wide with fear. You have but to place him upon the ground to renew his friendship—a contented grunt and then a squeal for more eats. One old lady said that he is modest. He will keep out of your way when sweeping, but will eat up the broom if you leave it for five minutes. Perhaps that is modesty. At any rate, the guinea-pig fears action or motion, but not form.

We are referring to this eating-habit quite a little. The guinea-pig is one of those animals which refuse to go on a hunger-strike. In several years' association with the cavy, I have never caught one of them drinking or sleeping. The only times I have not caught them eating was when there was nothing upon which to nibble. Corn, banana peel, carrots, and bread are his standbys, but he will eat almost anything. What he insists upon is, a varied diet. Leave four choice foods with him for a couple of days, and he will squeal for something different. He is not strong for potato peels and loathes turnips. It has been claimed that, when thrown into a snakes' cage to furnish them with food for the future, he will contentedly nibble the rattles off the reptiles, unless they hasten to devour him first. He is an impudent eater. The guinea-pig was classified by our negro janitor as "De animal wid dah powahful stomick." Even though the guinea-pig should breed rapidly, it costs so much to feed them that guinea-pig inoculations will always constitute a laboratory luxury.

Varieties of Guinea-Pig

We have said that there are 1001 different kinds of guinea-pigs, and these may be variously classified. As to the quality of their hair, we speak of the Peruvians or long-haired types; the Abyssinian or coarse-haired types; and the smooths. As a rule, the smooths are the ones used in laboratory work. The silky hair of the Peruvians may reach five inches in length, and sometimes it is done up on curling irons when specimens are to be exhibited. The hair of the Abyssinians may be almost as stiff as scrubbing-brush bristles and it is arranged in rosettes or whorls. The most beautiful of the types employed in experimental work are the pure white pigs with pink eyes. However, the interbreed pigs (cousin with cousin, etc.) appear to be stronger types. Their head is larger and they appear more stupid. The purer types resemble very much in appearance their putative wild ancestor, the "capabara," a South American rodent loving water and sometimes attaining a length of three feet. All members of the cavia family reach their full dimensions within eight months.

Several quaint habits have been charged to the guinea-pig; namely:

1. That his squeal is one of the first signs of spring, quite as reliable as the croaking of the frog.
2. That he is the most prolific of all mammals, one pair properly bred proving the parent stock of a thousand offspring in a year.
3. That when picked up by his tail his eyes will drop out of his head.
4. That he will scare away all rats and mice.
5. That he is good to eat.

Let us take the several statements.

Last April I prepared to investigate as to whether or not the squeal of the cavy might be taken as a sign of spring. I had waited long and in vain for the concert of the frogs. Fact of the matter was, I wanted to know whether it was time to trim my grape-vines. Approaching the pen, I heard a vigorous squealing and hastened to tell my wife that by scientific experiment and actual observation I had verified this point. To my surprise, she said: "Those pestiferous pigs have squealed all winter, as you would have known had you taken the trouble to care for them at least part of the time."

Is He Prolific?

The cavy is not extremely prolific, or else I have not come into contact with such varieties as breed rapidly. To breed, they must be kept quite dry and warm; but especially dry. Do not bathe your guinea-pigs. Sudden change of temperature is fatal. I do not usually get from 9 to 12 in a brood, but rather from 3 to 6. In some periods they may breed every six weeks. The young are born with eyes open and with hair.

The female cavy has but two teats, but these are worked overtime for the next five weeks, at which time the young are promptly weaned and the next brood puts in its appearance.

However, for some reason I have not observed this rapid proliferation to proceed for any great length of time. The parents go on a strike, which may be long and necessitates the securing of new males or a cutting down of the rations. So, this feature has held down my yearly output. I have not complained, however, since I have raised them for my own use only. This relative sterility has been offset somewhat by the fact that the "children" begin to breed when ten months old.

When picked up by his tail, the eyes of the guinea-pig drop out, and he may be forced to search for a considerable time before he can find them and replace them in their orbits. Anyone who doubts this statement should demonstrate it to his own satisfaction.

The statement that the guinea-pig will scare away rats and mice appears to have no foundation in fact. Mice like to bed in his straw with him, and rats will quickly slay him if permitted to reside near him.

The guinea-pig has been regarded as unwholesome food. I have never eaten a guinea-pig. In some of the Spanish countries, they are eaten and regarded as an excellent dish. They are closely related to the rabbit and may be kept clean. Straw should be changed often and the pen kept dry. They may be isolated for a day or so before slaughtering them. As to American chefs, we refer their attention to recipes of Spanish cook-books, as *cavy en casserole*, *cavy capsicums* and *cavy aux fines herbes*. Those who eat pork or possum could not possibly criticize baked cavy and onions. I have always wanted to taste a cavy, but have never been able to prevail upon the female members of the family to dress and cook one.

The hair of the cavy, and especially of the smooth varieties, sheds almost every season. However, I am informed that the rough- and silky-haired cavies are an exception and are now being used by furriers.

Some of us may eat the cavy, some of us may wear him round our neck, and still others may overlook his imbecility and accept him as a pet. But most of us prize him for his bacteriological possibilities. Next month we shall consider some of the latter.

The Doctor's Horse

By Nelson S. Mayo, D. V. S., Chicago, Illinois
Secretary of the American Veterinary Medical Association

WHILE the automobile must hold the foremost place as a means of transportation for the physician, there are localities where and seasons of the year when the horse must be depended upon to take the doctor on his mission. In many mountainous regions the physician must climb the hills and ford the streams on a saddle-horse, carrying in his saddle-bags the medicines and instruments necessary for the practice of his profession. Even in comparatively level regions there are seasons of mud and snowstorm when the horse must be used, even if the doctor is fortunate enough to own an automobile, so that in a country practice the horse still has a place.

In the selection of a driving horse, there is always the personal factor to be considered,

as in the selection of a wife; but in spite of this there are certain "good points" about a horse that all good horsemen and judges agree should be investigated carefully.

Thus, in selecting a horse, the first thing to be considered is the purpose for which it is to be used as well as the conditions under which the horse must work. If it is purchased for saddle purposes it is important that it be an easy-riding animal. In some regions the gaited horse is preferred. While there are objections to gaited horses, yet, under average conditions, such an animal is by far the most comfortable under the saddle. In deep snow or mud, gaited horses do not travel as well as do the walk, trot, and canter animals. A gaited horse with a good running walk is not only easy to ride but he will cover distance rapidly and easily.

In some cases a doctor may desire a "combination" horse, or one that can be ridden or driven as desired. Good combination horses are not common, but, as a rule, they are desirable animals to own. Where a trotting saddle-horse is desired, he should be given a good trial under the saddle, since there is great variation in the comfort of riding, some trotting horses being easy for the rider while others are very hard to ride. In a rough region where roads are heavy, a stronger, heavier horse is needed than where the roads are good.

In selecting a horse, it is desirable to get a nice-appearing animal of a dark color, for instance, dark-chestnut, black, brown or bay. A good sorrel is not objectionable, but its color is liable to fade during the summer. It is well to avoid white or light gray horses since their coats stain easily and the hair shows plainly on dark clothing when they are shedding their hair. Spotted horses or those of unusual or very striking colors should be avoided, as they are suggestive of patent-medicine venders or lightning-rod agents. A nice-looking, closely-built, strong-going, sensible horse with an outstanding individuality will meet the demand of the doctor for steady, consistent work and, barring accidents, should give many years of good service.

It is a decided advantage to have a horse that is known throughout the countryside as well as in the town. Such a horse is a good advertisement, attracting attention and favorable comment, and it will bring many favors, since nearly everyone is glad to "give the road" to the doctor. Then, too, you know your horse and his peculiarities, and while the doctor is not supposed to have any unusual characteristics, if he does, his horse will soon become familiar with them also.

As Drummond says in "The Habitant":

A good type of all-around doctor's mare, with foal

An' w'en de cole rain was commence again
  An' we're sittin' at home on some warm cornerre,
If we hear de buggy an' see de light
Tearin' along t'roo de black, black night,
  We know right off dat's de ole Docteur!

An' he's smart horse sure, w'at he call "Faubourg,"
  Ev'vy place on de Parish he know dem all,
An' you ought to see de nice way he go
For fear he's upsettin' upon de snow,
  W'en old man's asleep on de cariole!

—

[Doctor Mayo has consented to prepare for CLINICAL MEDICINE a nunber of short articles regarding the care of the doctor's horse. He will answer any questions you may feel like asking about *your* favorite nag.—ED.]

Diseases of the Alimentary Canal

By A. L. BENEDICT, A. M., M. D., Buffalo, New York
Editor of "The Buffalo Medical Journal"; Author of "Diet in Health and Disease," and "Golden Rules of Dietetics."

EDITORIAL NOTE.—This is the third paper in Doctor Benedict's series dealing with the diseases of the alimentary canal. We are sure that every reader of "Clinical Medicine" will be pleased to learn that this series will be continued for several months. Gastric disorders are always troublesome—difficult to diagnose correctly; not easy to treat successfully. In order that every reader may apply in the best way possible the principles laid down in these articles, we invite everyone to "fire in" the questions he wants answered.

Abnormalities of Gastric Secretion

IN ORDER to simplify the discussion and to put it upon the basis appropriate for the general practitioner, it has seemed best to sketch with a broad pencil, to omit details and even some qualifications necessary to give an absolutely correct idea of a certain minority of cases. In a downward direction, the secretory conditions encountered are as follows: hyperchlorhydria, euchlorhydria, hypochlorhydria, achlorhydria, achylia.

Hyperchlorhydria

Hyperchlorhydria may be defined as a condition in which, by titration, the stomach contents at the height of digestion (one hour after a light meal, such as a slice of bread and butter and a glassful of water; two hours after a meal with egg or meat and perhaps potato added; three hours after a hearty mixed meal) approach, equal or exceed the physiologic strength of undiluted gastric juice. This physiologic standard (not to mention quite recent investigations which tend to show a higher acidity) corresponds to 50 percent of a decinormal solution.

Normally, the dilution of gastric juice with food and drink of test meals or ordinary meals reduces this acidity to about half, or to 25 percent of a decinormal solution. Any stomach contents taken at the height of digestion that show a 50-percent acidity may be considered evidence of hyperchlorhydria, although extraction of practically pure gastric juice of the same acidity ordinarily would be considered normal.

If, however, pure gastric juice is found constantly, it indicates a secretory abnormality of the same general nature as hyperchlorhydria and by most authorities this would be considered to be owing always to the irritation of an ulcer.

The total acidity in hyperchlorhydria does not generally exceed 75 percent, but it may rise to 100 percent in rare cases. The total acidity of the hyperchlorhydric stomach-contents, on account of the inhibition of fermentation, is not, as a rule, very high. For instance, with a hydrochloric acidity of 50 percent, the total mostly will be about 75 percent. The more hydrochloric acid, the less additional acidity of all kinds; so that, for a hydrochloric acidity of 80 percent, the total will be 90 or 100 percent.

It is difficult to assign the lower limit of hyperchlorhydria. Many authorities allow a very small margin beyond the normal or even consider anything over 25 percent as hyperchlorhydric.

Here, we must consider both degree of acidity and amount of contents. For instance, if, with a hydrochloric acidity of 30 percent, more chyme is extracted than the total bulk of the test meal, we may consider the case as one of hyperchlorhydria; while, if the contents are within the normal limit of 100 Cc. of residue plus secretion, after a bread-and-butter and water meal totaling 250 Cc., it is better to consider the secretion as within normal limits. Without such marked increase in bulk or a liquid state indicating marked secretion of gastric juice after most of the meal has passed the pylorus, the writer would scarcely use the term hyperchlorhydria, unless the hydrochloric acidity was at least 40 percent.

The figures set down should not be understood to mean actual percentage of acid, but percentages of decinormal solutions, the readings being made at the point at which dimethylamidoazobenzol changes from cherry-red to orange, no cherry-red remaining at the edge against the white porcelain dish. An additional change occurs for about 10 degrees further, as the alkaline decinormal solution is added, until a clear straw-yellow is reached. This further change probably is due to organic acids and by hydrochloric acid in organic combination. That free hydrochloric acid is not the cause, may readily be proved by control experiment.

To a second sample of filtered stomach contents, add decinormal alkali in the amount necessary to obtain the orange color with dimethyl, but without the last-mentioned indicator. Then apply the phloroglucin-

vanillin or, what acts in the same way, the sugar-resorcin reagent and heat. It will be found that we are just about at the limit of the free hydrochloric acid reaction, namely, the non-appearance of a crimson ring at the margin of the evaporating liquid.

The reason for dwelling on this point is, that a good many men have first of all set a rather low limit of hyperchlorhydria, say, 30 percent of acidity, and then have made their readings at the final straw-yellow point, so that they have included with hyperchlorhydria cases with a real hydrochloric acidity of only about 20 percent; which, if anything, is below the normal.

The practical critic will doubtless object, why trouble the general practitioner with this chemic discussion, requiring laboratory tests? Why not give a simple, clinical test that will enable a diagnosis to be made? Because, in the writer's experience, hyperchlorhydria absolutely can not be diagnosed except by chemic test.

With practice, one can determine whether there is a considerable amount of hydrochloric acid or some other acid in the stomach, by administering sodium bicarbonate in saturated solution one hour after a meal—or later—and auscultating the effervescence. But one cannot differentiate except between very little and considerable acidity, and also cannot differentiate between different kinds of acidity. If one has had considerable experience with this test, he may very readily exclude hyperchlorhydria and euchlorhydria and say that the stomach contents are low in acid and, after having demonstrated hyperchlorhydria, the test is very useful in keeping approximate track of the progress of the case on an antacid regimen, but it cannot, in a new case, be relied upon to make the primary diagnosis of hyperchlorhydria.

Everyone is familiar with the textbook and lecture description of the symptomatology of hyperchlorhydria: acid eructations or burning in the stomach occurring one hour and subsequently after a meal; and with the equally classic differential point from gastric ulcer, that the pain and burning of mere hyperchlorhydria are abated by taking food, while they are increased in the presence of ulcer.

There is some degree of truth in these statements. For instance, if a chemist or physician familiar with the taste of the ordinary organic acids of fermentation and of hydrochloric acid has an eructation of a sharp, clearly acid liquid, if he has been exposed to nervous strain, has a burning in the stomach, and he knows that he is not subject to ordinary sour stomach from fermentation, he may be reasonably sure that he has an attack of hyperchlorhydria. The diagnosis is not strictly subjective; it is based on self-observed objective signs. The average patient, however, cannot be relied upon thus to discriminate and, even if the physician were willing to taste the eructation instead of testing it, it is present in too small amount for either purpose, besides being partly or completely neutralized by the saliva.

Hyperchlorhydria of considerable degree may exist without concomitant burning in the stomach. An ordinary organic sourness may cause burning, and this may be relieved, temporarily, by taking food. Hyperchlorhydria—actually demonstrated, and where there is no blood or other positive evidence of ulcer—may give rise to increased pain upon ingestion of food. Well-demonstrated ulcer does not always cause definite gastric pain; but, if it does, this pain may be relieved by taking food.

In short, the clinical symptomatology so long taught is absolutely unreliable. The most beautifully typic pictures of hyperchlorhydria without actual colic and jaundice, and with marked hypochlorhydria, may occur when there are gallstones; also in chronic appendicitis and a variety of other ailments.

Euchlorhydria

Euchlorhydria may be defined as the normal state of the gastric contents, with regard to hydrochloric secretion, and to lie between a decinormal acidity, as indicated by dimethylamidoazobenzol read at the orange point, of 30 and, say, 15. While, of course, not a functional disturbance, it is worth while to emphasize the fact that patients may complain of gastric symptoms although having a perfectly normal hydrochloric acidity, and, indeed, with the other chemic tests reacting normally.

These symptoms may be referred or they may result from motor conditions, sensory perversions of function or from actual gastric lesions not at the time or even generally interfering with the secretory function. Thus, for example, a patient, referred by a nervous specialist, was found perfectly normal as to physical and chemic examination; however, before further investigations could be carried out, he became despondent and committed suicide, apparently having been discouraged rather than encouraged by the favorable report. In females, the same condition has

been found, when there was nothing but movable kidney to account for the subjective symptoms.

Hypochlorhydria

Hypochlorhydria may be defined as that degree of gastric acidity ranging from below 15 percent down to complete absence of hydrochloric acid, as indicated by the negative reaction with dimethyl or phloroglucinvanillin or sugar-resorcin, without the addition of alkali solution. If in all cases chemical tests were applied, this probably would be the commonest gastric condition observed in patients complaining in a general way of gastric symptoms. Hypochlorhydria is rather to be expected in inveterate tea-drinkers, in flabby elderly women and men, in those having chronic gastritis from hepatic sclerosis or other cause, in periods of nervous and physical depression from almost any cause; moreover, it probably occurs quite regularly in typhoid and other fevers, although here there is an obvious contraindication to exact methods of diagnosis.

As one's practice becomes more and more limited to major cases, hypochlorhydria becomes less common, and, *per contra*, hyperchlorhydria more common. So, too, as one gets away from the poorer, less-nourished and more exposed class and to those subject rather to dietetic excesses, lack of fatigue and exposure, and more prone to neurotic conditions, the same phenomenon is observed; and this probably accounts for somewhat inconsistent statements as to the relative frequency of the two contrasted conditions.

It should be remembered that, after a very hearty mixed meal, any appreciable amount of free hydrochloric acid may be considered as normal, or, at least, that a moderate failure in the amount of the acid found in excess of its organic combination is not very significant.

While, in the absence of quite marked stagnation of stomach contents or the ingestion of food already in a state of fermentation or impregnated with bacteria and yeasts, any marked excess of hydrochloric acid tends to check fermentation, on the other hand, a lack of this acid predisposes to fermentation. Yet, be it because the food is comparatively sterile, or because of the lack of stimulation of the pylorus to tonic contraction by hydrochloric acid or because of some biologic inhibition of bacteria, it is by no means uncommon to find the existence of little fermentation even though hydrochloric acid is markedly deficient.

However, in the average case of well-marked hypochlorhydria, there is likely to be considerable fermentation, the total acidity of the stomach contents, by the phenolphthalein test being high (75, 100 or 125 percent), while the free hydrochloric acid amounts to only a few degrees. In such cases, there is the specific odor or chemic reaction of lactic, acetic, or other organic acids, considerable formation of carbon dioxide, the latter often producing a foam and leading to more or less belching. Here we have those clinical cases of acute sour stomach, often associated with sick-headache, or the chronic states in which the patient describes his stomach as a vinegar-factory.

Achlorhydria

There is some doubt as to whether the term achlorhydria should be applied to cases in which free hydrocholic acid is lacking, or only to those in which it has never been secreted at all. As a matter of convenience, the writer prefers to employ this term in the former sense, and to let it indicate merely an extreme, and limiting degree of hypochlorhydria.

If hydrochloric acid has been secreted at all, pepsinogen is activated into pepsin, combined hydrochloric acid is present, and upon adding hydrochloric acid to the gastric filtrate, it will digest pepsin. Also, the peptone or albumose test—a violet ring above a cool or only slightly warm alkaline copper solution—will be positive.

(*To be continued*)

What Others are Doing

EMETINE IN NONAMEBIC DYSENTERY, AND IN COLITIS

Certain observations have been made public of late which suggest that emetine may be valuable also in dysentery caused by other organisms than the entamœba histolytica. Thus, for example, three cases of nontropical dysentery, where the stools contained spirochetes, but not amebas, were treated with emetine by Tribondeau. There was clinical recovery, the stools becoming of normal consistence within two or three days, although the spirochetes did not disappear from the stools. Bertrand (*Bull. d l'Acad. d Médecine*, April 14, 1914) also reports a case of dysentery, in which the stools contained both amebas and spirochetes, completely relieved by four subcutaneous 1-2-grain injections of emetine hydrochloride. In this instance, both the amebas and the spirochetes disappeared from the discharges.

Bertrand also has employed emetine in the treatment of chronic enterocolitis occurring in tropical countries, and reports that this remedy causes an astonishingly prompt improvement in the consistency of the stools, while at the same time reducing the number of daily evacuations.

Further, Tribondeau has found emetine useful also in the common mucomembranous colitis occurring in temperate zones. Here again it improves the character of the discharges, while reducing the amount of mucus secreted. Just how the drug acts in conditions of this kind is not speculated upon by the author; however, the results obtained certainly warrant its more general employment in this disease.

THE HEMOSTATIC ACTION OF EMETINE

Another illustration of the striking action of emetine, in arresting hemorrhage, has been reported by Palasne and Champeaux to Bertrand (*Bull. d l'Acad. d Méd.*, April, 14, 1914). In this case, there was vomiting of blood, owing to a duodenal ulcer. The bleeding was promptly arrested by a single hypodermic injection of 2-3 grain of emetine hydrochloride. In a case of hemothorax, the result of a penetrating wound of the chest, the injection of 2-3 grain of the emetine, repeated once daily for six days, seemed to control the symptom.

Bertrand again points out the futility of trying to explain the hemostatic effect of emetine through circulatory depression, revulsion or induction of nausea. As yet no completely satisfactory means of explaining just why the emetine stops bleeding has been supplied by anyone; still, that it does do so, and that quickly, there is now an abundance of evidence to demonstrate.

GIVING QUININE IN MALARIA

In a very helpful paper upon the management of malarial fever, published in *Merck's Archives* for September, 1914 (p. 276), L. Sexton objects to overdosage with quinine. He avers that a dosage of more than 30 grains taken within the 24-hours period may prove toxic. He points out that 15 grains of the alkaloid yields a 1 : 5000 solution in the blood of the average patient, while twice that amount is quite sufficient to destroy all noncrescent plasmodia, provided it is given three days in succession. He asserts that the quinine acts better when given in two or three 7½ to 10-grain doses, and preceding the expected chill time by three or four hours, so as to have the maximum saturation of the blood at the time the plasmodia are newly developed and most susceptible to the action of that agent.

Persons suffering from defective hearing or middle-ear disease, as also nervous, susceptible individuals, should receive the smallest quantity of quinine capable of destroying the parasites. There are some people who have a particular idiosyncrasy to this drug, and in them it may produce urticaria, or more often severe ringing in the ears. Such persons, Doctor Sexton says, should take the quinine in small doses or in combination with sodium bromide or phenacetin.

Our own suggestion would be that the physician will get best results from quinine hydrobromide. Not only is this salt very

soluble, and therefore very active, but it also is less prone to produce the disagreeable by-effects characteristic of quinine poisoning.

MORE ABOUT MASTISOL, THE BACTERICIDE, HAND-VARNISH, AND LIQUID PLASTER

In our February issue (p. 155) and in that for July (p. 620), there appeared paragraphs on the virtues of certain antiseptic varnishes for coating the hands of the surgeon, as a substitute for rubber gloves, the second one presenting a formula for a preparation imitating the proprietary mastisol (viz., finest mastic, Gm. 40; purest benzol, Gm. 60; castor-oil, gtt. 20). The favorable reports published about the last named preparation find corroboration at the hands of a military surgeon now serving in an Austria-Hungarian military hospital, Prof. Dr. A. Eiselsberg. This writer asserts (*Militaerarzt*, No. 21, 1914) that in his present extensive experience he has found mastisol (the original) eminently satisfactory for the purposes recommended; however, still more gratifying have been the results with a varnish prepared for him which has this composition:

Mastic	Gm. 20
Resin (colophonium)	Gm. 10
Turpentine (thick—not the oil!)	Gm. 7
Benzol	Gm. 50

All ingredients must be of highest grade, of course.

For certain purposes, Eiselsberg objects to the use of ready-made adhesive plaster, the latter being prone to loosen after a length of time. In its place, he is using the foregoing varnish.

The manner of using is as follows: He paints the skin with the sticky liquid, waits a few minutes for the solvent to volatilize, then presses on the plain bandage; which thus becomes the adhesive plaster. In this way, he applies extension bandages for fractures of the limbs, shoulders, and the like.

IMPROVED METHOD FOR INFUSION OF DIGITALIS

For several years' Oigaard (Copenhagen) has been preparing infusion of digitalis from leaves specially preserved, and claims for his method superior results. (*Zeitbl. f. Herzkr.*: *cf. Ther. d. Gegenw.*, July 1914). The reason why digitalis infusions are not reliable, he points out, is largely because the leaves are hygroscopic and, hence, deteriorate. To obviate this drawback, Oigaard proceeds as follows:

Immediately after opening an original sealed container of standard titrated digitalis powder, he divides the batch up into doses of various size (such as are commonly prescribed), puts each powder into a separate small (dry!) glass tube, then seals the latter. These tubes are given to the patient, who is instructed to prepare the infusion freshly from one of these powders for each dose, by pouring on boiling water and letting stand fifteen minutes; or, respectively, to take one of the powders with a swallow of water.

Yet how much more simple and satisfactory to prescribe a pure digitalin or other glucosidal preparation of known strength. The water required can be swallowed *ad lib* according to the necessities of each individual case.

AS TO THE REAL NATURE OF SEPSIS

The phenomena of sepsis—blood poisoning—have been considered to depend upon the presence and multiplication of the pathogenic organism in the blood, and this view still generally prevails. However, proofs to the contrary are accumulating, and opposing views were voiced by at least two clinical investigators at the German Congress for Internal Medicine held April 20-24 last, as quoted in the *Wiener Medizinische Wochenschrift* for September 24, 1914. Inasmuch as the statements of these speakers—Schottmueller, of Hamburg, and Paessler, of Dresden—cover or supplement each other, they may be considered together.

Thus, then, the assertion is, disease-germs do enter the blood current, but they never proliferate there. Consequently, the salient feature of sepsis is not, as commonly assumed, the multiplication of the germs in the blood; rather, it is a nidus of the bacteria developed in some organ, and from thence the blood is being invaded again and again by fresh broods of the germs. Intensely explosive attacks may, possibly, constitute an exception. But in all chronic forms of sepsis, germs entering the circulation are very rapidly destroyed.

The reason why any germs may establish successfully given breeding-spots must be looked for in the fact that there circulation is poor and, hence, the bactericidal action of the blood cannot bear upon them.

The foregoing considerations explain why increase of the blood's bactericidal power or the introduction of specific protective agents (serums, vaccines, and chemicals) into the

current, broadly speaking, fails of satisfactory therapeutic results in combating septic conditions. (Diphtheria and tetanus must be excluded; while salvarsan appears to have been effective in anthrax.) Hence, mercury bichloride and silver preparations fail of their purpose. Antifebriles cannot be considered as specifics; they merely alleviate the symptoms.

In a general way, treatment must be directed toward conserving vitality by improving the nutrition; Schottmueller advocates intravenous injections of solutions of salt or of grape-sugar; or to administer these as enemas. Alcohol he rejects. Real results, however, according to the same authority, have been obtained only by operative means; even where the infective nidus was situated in the interior (this including puerperal fever and otitic infection). Removal of the tonsils, according to these gentlemen, does not come under this rule, for reasons which are not very clear.

This is a surgical viewpoint regarding sepsis, and the methods of treatment suggested seem both reasonable and sound. However, it is not always possible to remove each nidus of disease, and to aid the body in the effort to destroy the "fresh broods of germs" seems a logical method of treatment. A remedy that naturally suggests itself is nuclein, given to increase the number of those defenders of the body, the leucocytes; and the nuclein may well be employed in association with an appropriate bacterin.

NONOPERATIVE TREATMENT OF TUBERCULOUS GLANDS

Here is a surgeon recommending nonoperative treatment of tuberculous glands of the neck. In the October 3, 1914, number of *The New York Medical Journal* (p. 657), Robert T. Morris praises highly the injection of from 1 to 3 minims of a 7-percent solution of iodoform in oil, as originally recommended by Mosetig-Moorhof. This amount is injected, at a sitting, into each one of the larger glands, a little cocaine solution serving to relieve the pain, if thought necessary. These iodoform injections are made at intervals of three or four days. Hygienic and other treatment generally useful in tuberculosis should be associated.

The sole objection to these injections is the pain which they cause, and this may be a serious matter when younger patients are involved. When this happens, Doctor Morris has secured equally good results by the induction of local hyperemia in the following manner:

The patient being in a reclining position, a hot-water-bag is applied for a minute or two, then an ice-bag for a minute or two, then again, a hot-water-bag, this alternation being continued for an hour once or twice a day. By this method of treatment, he has secured the cure of tuberculosis of the glands of the neck after a persistent course of from one to six months.

Recently he has added to the preceding methods the aid of the high-frequency electric current and the hypodermic injection of tuberculin. As a result of the adoption of these methods in the Postgraduate Hospital of New York, Doctor Morris declares that during the last ten years more than 100 patients afflicted with tuberculous glands of the neck have been treated in the department under his service, without operating in a single instance, except where the glands were actually suppurating when the patients were first seen.

MEDICAL TREATMENT OF CHOLELITHIASIS

Cholelithiasis, declares R. J. Smith (*Merck's Archives*, Sept., 1914, p. 273) arises from bile stasis, plus infection, and inflammation. The treatment may be hygienic, dietetic, and medicinal. Among the helpful expedients are: life in the open air, exercise short of fatigue, and a diet sparing in meats, fats, and starches, but presenting a considerable proportion of milk, buttermilk, fresh vegetables, and fresh fruits. Cultures of the Bulgarian bacillus are an important aid in the treatment, since intestinal putrefaction is a complicating feature in these cases, while the lactic-acid organism modifies and tends to prevent intestinal putrefaction. Doctor Smith further says that the combined sulphocarbolates also are efficient aids in the prevention of intestinal fermentation.

For the hepatic colic, Doctor Smith recommends hot or tepid baths in addition to colonic irrigations; also, glonoin, 1-100 grain, on the tongue, followed by a hypodermic injection of 1-100 grain of atropine, or of hyoscyamine in similar dosage. Strychnine arsenate helps to restore central nerve control. One standard granule each of glonoin, hyoscyamine, and strychnine may be given every fifteen minutes in hot water, until relief is secured or the physiological action of the hyoscyamine appears. If in spite of this medication the pain continues

severe, he recommends the hypodermic injection of morphine and hyoscine in association.

After the acute attack is relieved, the systemic treatment should be taken up, as follows:

The patient should receive boldine, 1-3 grain; chionanthin, 1-3 grain; bilein, 1-8 grain, and sodium succinate, 5 grains, repeated four times daily, and should freely drink soft water. This medication should be continued for from six months to a year.

The chionanthin is said to be aperient, diuretic, and febrifuge, and seems to have a specific action upon catarrh of the bowels, by reason of promoting a free flow of bile. The boldine, according to Dujardin-Beaumetz, increases the elimination of urea, augments the secretion of bile, and has a specific influence upon the pathologic conditions of the liver, gradually changing these to normal. The bile-salts are our best cholagogs.

How sodium succinate acts in cases of cholelithiasis, Doctor Smith does not explain. However, he declares that it certainly prevents the paroxysms, it may liquefy the bile, while also it seems to subdue the catarrhal affection of the biliary passages, thus quelling the infective cholangitis and cholecystitis.

In favorable cases, where treatment in the manner just described has been pursued, Doctor Smith finds that "the symptoms improve, local distress becomes less, attacks of pain are less frequent and less severe and finally cease, and the patient gives every indication of a cure."

NOVEL TREATMENT OF POSTDIPHTHERITIC PARALYSIS

Believing that postdiphtheritic paralysis is due to the nerve-center being attacked by diphtheria-toxins, W. M. Barton (*N. Y. Med. Jour.*, Oct. 3, 1914, p. 660) came to the conclusion that the most rational method of treatment to neutralize the systemic diphtheria-toxin is by the administration of the specific antitoxin, a method of treatment which originated in France some years ago. He reports a very interesting case in which this course was followed.

The patient was a young man of 23 who went safely through a severe attack of diphtheria, only to be affected some weeks later by gradual loss of muscular power in the hands and feet. The legs were so enfeebled that for a time he could neither walk a step nor even stand unsupported. Doctor Barton immediately began the administration of diphtheria-antitoxin in 5000-unit doses. This dosage was repeated at one- or two-day intervals, until a total of 60,000 units of antitoxin had been administered. As a result, improvement was noticed within a few days, and in a little over a month he was able to walk about unassisted and return to work. Within six weeks he, apparently, was completely cured.

Doctor Barton evidently has no faith in the charge so often made, that diphtheria-antitoxin may cause paralysis; indeed, all the evidence now available tends to prove that exactly the opposite is true—that antitoxin, when properly administered, tends to prevent this serious complication.

TYPHUS, THE PLAGUE OF ARMIES IN THE FIELD

In a recent number of CLINICAL MEDICINE (see October, p. 1028), Dr. A. Rose calls attention to the scourge of lice from which soldiers have suffered during all military campaigns. As he pointed out in this article, the louse now is known to be the carrier of typhus; and typhus is one of the great plagues of the camp.

Doctor Rose's observations are of special interest, in view of the publication of two short papers, dealing with the same subject, in the *Comptes Rendus de l'Académie des Sciences* for November 9, 1914, in which Nicolle and his collaborators in the Pasteur Institute at Tunis definitely demonstrate, as already has been proven by our own medical officers of the Public Health Service, that the louse is the agent, or "carrier," in the transmission of typhus.

Doctor Lavaran, in commenting upon the paper of Nicolle, Blanc, and Conseil, declares that the discovery of this relationship has made possible practical methods of preventing typhus, which already have worked remarkable results. Thus, the disease, which has always been endemic in Tunis and which each year has carried off a number of victims among the indigenous population, has now nearly disappeared. In 1909, there were 836 cases of typhus, but in 1912 only 22. The only prophylactic measure resorted to has been the systematic destruction of all the lice found on the persons and in the vicinity of patients suffering from this disease.

Of most importance, however, Lavaran points out, is the danger of epidemics of typhus in the French army now in the field, This disease has always been one of the great plagues of military campaigns. The soldiers.

he says, in order to protect themselves against cold and projectiles, burrow into the earth and live under most unsanitary conditions, thus favoring the spread of the malady.

At the present time, as a result of the development of artillery, the employment of trenches is more general than ever, and there consequently is danger that during the winter months the germs of typhus may be implanted among the troops and thereby give birth to a disastrous epidemic. Such danger Lavaran thinks is peculiarly to be feared because typhus is known to be endemic in certain German provinces, particularly in Silesia, and this danger is intensified by the discovery of large numbers of lice in the German trenches and on the bodies of German prisoners. It is evident, therefore, that the treatment of phthiriasis among soldiers is necessary, not merely from the standpoint of cleanliness and hygiene, but more emphatically as a means of preventing the possible propagation of typhus among the armies now facing each other.

THE DOSAGE OF DIPHTHERIA ANTITOXIN SCIENTIFICALLY DETERMINED

Of exceeding practical interest to physicians is what is known as the Schick test, used to ascertain whether or not persons exposed to diphtheria are susceptible to the disease, the purpose of this test being to determine whether prophylactic injections of antitoxin should be given or not. The technic of this test was reported by W. H. Park, of New York, in a paper read at the last meeting of The American Medical Association. He showed quite conclusively that a large percentage of persons exposed to diphtheria (more than half at least) are naturally immune to the disease.

Now Schick has developed this reaction further and applied it to the determination of the amount of antitoxin actually necessary to produce immunity to the disease and to neutralize the diphtheria poison after the disease is once contracted. This work is reported in the *Zeitschrift fuer die gesammte experimentelle Medizin*, April, 1914 (p. 83).

The Schick test is made by the subcutaneous injection of a very small quantity of diphtheria toxin. If the patient is immune, nothing happens. If he is not immune, a slight redness and swelling develops at the site of the injection. In applying this test for the determination of dosage, Schick proceeded as follows: First, antitoxin was injected intramuscularly into the test patient; then minimum quantities of diphtheria antitoxin were introduced beneath the skin, at 24-hour intervals. The exact immunizing effect of the antitoxic serum was measured by the diameter of the skin (Schick) reaction following.

A number of interesting deductions were arrived at as a result of these experiments:

1. It was shown that the dosage of antitoxin must be calculated according to the patient's weight.

2. It was shown that 50 units of antitoxin per kilogram (2 1-5 pounds) of the individual's body weight is sufficient to afford protection against dipthheria to those exposed.

3. In mild cases of diphtheria a single dose of 100 units of antitoxin per kilogram of the patient's weight is sufficient.

4. The maximum antitoxin effect is obtained with a dosage of 500 units per kilogram, larger doses than this having no influence whatever. Therefore, in the severest cases 500 units per kilogram should be injected.

5. As already pointed out by Park, Schick showed the necessity of administering the amount of antitoxin required at the earliest possible moment, on account of the time required to develop full antitoxin action.

Now to apply these observations:

We may say that as a prophylactic dose for a child weighing 20 kilograms (44 pounds), 1000 units of antitoxin should be the dose; 2000 units should be injected in mild cases of the disease, while in the severest cases 10,000 units may be required.

An adult weighing 60 kilograms (132 pounds) should be given a prophylactic dose of 3000 units, a curative dose of 6000 units if the case is a mild one, and if it is of the most severe type, a dose of 30,000 units. Of course, in cases of varying severity, between mild and severe, the dosage must be adjusted somewhere between these two extremes.

It is significant that Schick's observations bear out in a remarkable way the experimental studies and clinical observations of Professor Park.

ANOTHER CURE FOR PYORRHEA

The brilliant results obtained with emetine in the treatment of pyorrhea should not blind us to the possibility of developing other remedies of value in this disorder. Thus, it is of interest to find that P. G. White, a dentist in the U. S. Navy, is using mercury succinimide, with alleged good results. Its value in this direction became evident when

patients suffering from pyorrhea, upon being treated with this mercury salt for other conditions, were discovered to present a surprising amelioration in the condition of their gums. So far Doctor White reports having treated 6 cases of pyorrhea with mercury succinimide, and he declares that every one of these patients was cured inside of four or five weeks.

The dose of the mercurial given at the first injection varies according to the physical condition of the patient, but mostly it has been in the neighborhood of 1 grain. Thus, the first dose is about 6-5 (1 1-5) grain, and this amount is diminished by 1-5 grain at each injection (gr. 6-5, 5-5, 4-5, etc.), providing the improvement of the patient warrants such reduction. The injections are given at least once a week. Local treatment, attended to every other day, consists in the thorough removal of calcareous deposits and the extraction of hopeless teeth and roots.

The 5 cases referred to by Doctor White are described in detail in his paper, which appears in the October (1914) number of the *U. S. Naval Bulletin.*

These results are good, but apparently not equal to those secured with emetine.

IMPLANTATION OF NERVE-ENDS

Advances, almost startling, are rapidly being made in the hetero- and the auto-transplantation of tissues and organs, thanks to which many a helpless and hopeless cripple or diseased individual can have—and already has—his normal physical or physiological functioning restored, and thus again become a useful member of society. No doubt, further, the present terrible world war will have to its credit at least one good result—numerous surgeons attending this bloody conflict will improve the golden opportunity of applying to human beings operations hitherto restricted to experimental animals, while the more daring ones, moreover, will seek to extend the present field of actual knowledge in this direction. What a chance this, for instance, for Alexis Carrel, who since the outbreak of the war has been in charge of the military hospital at Lyons, France (his native city).

These reflections are suggested by the report of the proceedings of the 43d annual meeting of the German Association of Surgeons held in Berlin in April, and reported in the *Therapie der Gegenwart* for July. The particular presentation to which we here refer is an address by Doctor Heineke. (It is much to be deplored that in first-hand references to medical authorities continental reports systematically fail to give their initials and residence, thereby preventing their identification and personification in the mind of the reader—a real calamity in the case of the Meier's, Mueller's, Schmidt's and similar pervasive cognomens of other nationalities). But, to the point.

Already startling reports upon organic transplantation have been recorded in these columns, including those of nerves, but these experiments (upon animals) by Heineke are nothing short of wonderful, it seems, in their far-reaching effects. Thus, this operator severs a nerve supplying a given muscle and then implants some other healthy nerve into that muscle; and perfect union takes place. As a result, the muscle does not degenerate, but, rather, it very soon becomes electrically excitable, and, eventually, restored in function.

Indeed, this restoration has taken place even if the implantation was performed as late as three months after the respective nerve had been cut. The implanted nerve may be carried over from any other unrelated innervation-area.

The operation consists in merely inserting the end of the substitutive nerve anywhere into the paralyzed muscle and fixing it in place. The stump rapidly produces new end-organs, which grow into the muscle-tissue, by, presumably, following the nerve-paths present—as has been shown by other writers.

Another restitutive operation consists in apposing a healthy muscle to a paralyzed muscle; and here also the nerves of the former will enter and revivify the latter—a procedure successfully carried out by Hacker in the case of a human subject.

Similar operations by Katzenstein, albeit of a minor nature, have been mentioned in these pages not long ago.

THE PHENOL TREATMENT OF TETANUS

Some months ago, we referred, in CLINICAL MEDICINE, to the use of phenol (carbolic acid) in the treatment of tetanus, as originally advised by Baccelli. Owing to the frequency of this disease among wounded soldiers, this method of treatment has been taken up again in France. In a short paper appearing in *Comptes Rendus de l'Academie des Sciences,* for November 9, 1914 (p. 664), Caillaud and Corniglion report some recent results obtained with this remedy. They say

that among 200 wounded soldiers treated at the Hôpital Compleméntaire de Beausoleil there were 6 cases of tetanus. The first 2 cases were treated with antitetanic serum and chloral, and both died in about three days. This failure led the authors to try the Baccelli method, but supplementing it with the intravenous injection of lantol (colloidal rhodium).

Carbolic acid was employed in 1 percent solution, instead of the 3- to 4-percent advised by Baccelli. Of this solution, 40 Cc. was injected once daily, this quantity gradually being increased to 70 Cc., then again reduced after the patient began to improve. At the end of the treatment the 1 percent solution was replaced by a solution of 2 percent, of which the doses employed naturally were only half as great. The lantol (colloidal rhodium) was given intravenously in doses of 6 Cc, every day in the severe cases, until there no longer was danger; daily treatment for eight days being required for this. All the 4 cases treated in the manner described terminated in a cure.

The authors found the treatment to be well tolerated by all 4 men, both as regards the lantol and the phenol. There appeared neither general reaction nor local complications, the single inconvenience observed being an erythema, with a local induration, following the injection of a 2-percent solution of phenol. These symptoms disappeared quickly upon cessation of injections. Improvement set in rapidly, being slight at first, but gradually progressing toward cure, which was completed within from fifteen to twenty days in two very severe cases, and in about fifteen days in the two milder ones.

The authors say that 5 other tetanus victims have been treated in this manner, that is, either with phenol alone or combined with lantol. Where previously the mortality had been high, all of these 5 men recovered. This makes a total of 9 cures in 9 patients subjected to this treatment.

IODINE IN ACCIDENT SURGERY

A method of using iodine as an antiseptic —which M. R. Crain (*Amer. Jour. of Surg.*, Oct., 1914) calls "dry cleaning"—in emergency accident-cases consists in washing the skin surrounding a wound with a 1:1000 solution of iodine in gasolin. As soon as the skin is dry, he goes over the surface of the skin with a half-strength tincture of iodine This method is employed where there are open wounds, in which the use of the water and soap usually employed for scrubbing would be likely to carry more or less filth into the wound, thereby infecting it. Doctor Crain adds that, if there is much oozing from the surface of the wound after the vessels are tied, the tincture of iodine may be applied directly or the wound may be packed with gauze moistened with the iodine preparation. It is highly important that no water be employed, which would macerate the epidermis, for in that event the sterilization with iodine will not be efficient.

This method of treating wounds originated in Bastianelli's clinic in Rome and has been in use by the Mayo brothers for several years. Doctor Crain adds that, since the tincture of iodine corrodes everything with which it comes in contact, and, hence, is a bad thing to carry around by the surgeon in his bag, he conceived the idea of putting up the pure iodine in gelatin capsules. He explains that 4.89 grains of iodine in each capsule, when dissolved in 16 fluid ounces of gasolin, yields a 1 : 1000 solution, or of the strength employed in this procedure; while a capsule containing 13.59 grains of iodine, if dissolved in one ounce of alcohol, makes a 3.5-percent solution, which is half the strength of the official tincture.

This idea is an excellent one, and we commend it to our readers for adoption; with an additional suggestion to the experimentally inclined. It is barely possible that the volatile iodine in the capsule occasionally may cause the cap to stick fast. To obviate such a result, a little fine starch on the top of the body-capsule has been found useful in the case of other filling; here, however, the chemically indifferent talcum would be preferable. Of course, only a trifle should be applied with a fine brush, and none should enter the inside of the capsule.

OLIVE-OIL USEFUL IN TREATING INTESTINAL STASIS

At the present time there is a distinct mineral oil "cult." When Sir Arbuthnot Lane presented his ideas relative to the influence of intestinal stasis upon the production of autotoxemia, he advised the use of Russian mineral-oil as a laxative whenever surgical intervention is not required. Physicians everywhere have taken up the idea with amazing rapidity, and now liquid petrolatum is one of the "big sellers" at the average drug-store.

Doctor Beverly Robinson, writing in *The New York Medical Journal* (Nov. 28, p. 1053),

holds that olive-oil is a better agent for the treatment of obstinate constipation—or, intestinal stasis, as it is now called—than is the mineral oil. Taken by the mouth, olive oil is quite as innocuous as the nonabsorbable mineral oil; also, it promotes healthy nutrition, as well as being an equally good intestinal lubricant. The mineral oil, of course, is not a nutrient. Furthermore, olive-oil, when properly taken, causes no dyspeptic symptoms of any importance or which can not readily be corrected by a simultaneous use of pancreatin, to emulsify the fat. Finally, olive-oil promotes intestinal peristalsis, both when taken by the mouth and when administered as an enema.

Continuing, Doctor Robinson says:

"Some of the new abdominal supports may hold up relaxed organs without positive injury, but the true way of cure is, rather, to restore abdominal strength by proper exercises, instructed massage, and open-air life, as far as possible, supplemented by medicinal tonics if they are clearly indicated. Some of the really effective ones among these are found in our laxative pills. Such are, strychnine, nux vomica, and belladonna; podophyllin, euonymin, cascara, aloin, ipecac, may, one or several, be added in minute doses, and they doubtless help either the flow of bile or the contracture of the intestinal muscles. The absence or insufficiency of secretions, such as the gastric, pancreatic or intestinal juices, may wisely be overcome by being added to by a few products from honorable manufacturing firms, which are the outcome of scientific researches in a chemical and biological direction."

SODIUM AND POTASSIUM SALTS

Since the breaking out of the European war, the prices of potash salts of various kinds have gone sky-rocketing, this being due to the fact that Germany produces a very large proportion of the potash of the world and controls the market in this valuable commodity. Under the circumstances, American physicians are being generally advised by the medical journals to substitute the sodium salts for the potash salts. As a matter of fact, the sodium salts present certain very decided advantages and disadvantages. These are pointed out in an article by David I. Macht, in the Johns Hopkins *Bulletin*, September, 1914, p. 278. Doctor Macht has been investigating the action of potassium and sodium iodide and of the iodine ion on the heart and blood vessels, the experiments being made mainly on frogs, rabbits, and dogs.

Without going into the details of his experiments, it may be said that the potassium ion produces relaxation of the blood vessels and a marked depression of the heart, while the sodium ion has a slight stimulating action, both on the blood vessels and the heart. The iodine ion is found to be a powerful stimulant both of the heart and blood vessels, not only in the isolated organs, but also in the organs of living animals. The conclusion is, therefore, that it is not a matter of indifference which of the iodides is to be chosen. If it is desired to lower blood pressure, for instance, then the potassium iodide is to be preferred. On the other hand, if a distinctly iodine action is desired, not only is the sodium salt equally efficacious, but, since it is less depressing, it may be the preparation of choice.

CUMULATIVE ACTION OF DIGITALIS

At the late meeting of the German Congress for Internal Medicine, R. Gottlieb presented an account (*Muench. Med. Woch.*, No. 20, p. 1142) of some interesting work done by Von Issekutz, at the Pharmacologic Institute of Heidelberg, on digitalis (or any of its active constituents), for the purpose of determining why digitalis continues its action so long after it has been administered.

Issekutz performed his experiments upon still-surviving frog hearts; and this is what he deduced therefrom:

The cardiotoxic substances of digitalis are abstracted by the heart-muscle from the nutritive fluid (blood stream) passing through the heart. The heart-muscle fixes and holds the digitalic body in an extraordinary manner. The degree and persistence of the drug's action depends upon the length of time that the drug-laden current passes through the heart and upon the amount held back in the tissues. The portion of the drug first fixed does not at once produce any visible alterations in the heart's performance. When the process of empoisoning is interrupted sufficiently early, and before not enough of the poison is absorbed to kill, the heart will continue to beat.

At this point the proof can be brought of the relatively firm fixation of the digitalic substances by the muscle.

The pulsating heart is thoroughly washed out by a current of a biologic, nontoxic fluid circulating through it for a time—up to as long as one hour—thereby removing all extraneous poison from the interior of the

organ. Then the circulation of the digitalis-laden fluid through the heart thus treated is resumed, and is continued until it ceases beating, the time being noted.

The operator takes a second heart, otherwise in the same condition as the first one, but which has had no chance to become empoisoned, because not exposed to it. Then this fresh pulsating control-heart is subjected to the same kind of digitalis-laden current as the other, and this is continued until it also dies. It will be found that the former ceased beating much sooner than the one having had but one period of treatment; thus presenting conclusive proof that the first heart actually had absorbed the digitalis poison from the nutritive current and stored it in its muscular tissues.

ULTRAVIOLET-LIGHT DISINFECTION

As was first pointed out by Finsen, ultraviolet light is a powerful bactericide, and this fact has been practically applied in various directions, such as for sterilizing water and milk. Now Friedberger and Stioji, have demonstrated (*Deut. Med. Woch.*, 1914, No. 12) this agent's utility for disinfecting the mouth and pharynx, expecially in ridding the cavity of the diphtheria and the prodigiosus bacilli. The experiments thus far have been made with rabbits, in the case of which a sufficiently long-continued inradiation nearly, if not completely, eradicated the diphtheria germs from the buccal cavity, without producing any serious lesions.

The authors suggest the possibility of curing by this means chronic harborers (carriers) of the germs of diphtheria, articular rheumatism, cerebrospinal meningitis, and the rest.

SALOPHEN VERSUS ASPIRIN

In a contribution to the July number of the *Therapie der Gegenwart*, R. Thierfelder, of Plauen, points out how, in a very eminent degree, acetylized salicylic acid (commonly known as aspirin) combines in itself the desirable properties of an antirheumatic, antineuralgic, and analgesic; while in consequence of this fact it serves an excellent purpose when in the respective categories a definite diagnosis has not as yet been established. However, this remedy has become so popularized that, in the author's opinion, physicians might well look for a less-familiar substitute.

This need, Thierfelder believes, is more than fully supplied by the older, although neglected and almost forgotten, synthetic salophen—chemically, acetylparaminophenyl salicylate, or, more conveniently, acetylamidophenol salicylate, or, still shorter, acetamidosalol. This preparation, we are told, not only possesses all the valuable properties of aspirin, but even is preferable, in that it is less of a diaphoretic than is the latter. Moreover, aspirin is split up in the stomach into its components, and the liberated acetylsalicylic acid will add to the distress of those patients who already suffer from gastric hyperacidity.

Salophen also undergoes decomposition; not, however, in the stomach, but in the intestine, like salol. Salol, therapeutically, took the place of salicylic acid, because it did not irritate the stomach; but, in its turn, it was superseded by aspirin, because the alkaline intestinal contents at once set free the phenol of the remedy, and that attacked the kidneys. The same chemical result is true for salophen; however, in the latter case, the reaction is a slowly progressive process—and there is the difference.

Salophen, being the paramidophenylacetyl salicylic-acid ester ("salt"), by an alkali is split up into its components, salicylic acid and acetylparamidophenol, and after the third hour these two substances appear in the urine in very small and even percentage, and this continues up to the twentieth hour. It is this slow, gradual, and regular introduction into the system and its parallel passage through the kidneys that accounts for absence of disagreeable symptoms resulting from this salicylate, especially as to gastric and nervous disturbances.

The profession is reminded that some years ago salophen was credited by trustworthy clinicians as a decidedly valuable remedy, among whom were, for example, Guttmann, of the Berlin Moabit Krankenhaus; Froehlich, of the Allgemeines Krankenhaus of Wien; Gerhard, of the university clinic at Jena; Moseler, of the university clinic of Greifswald; also Drews, Claus, and Hennig.

Personally, Doctor Thierfelder has found in salophen an excellent analgesic, and, because of this, almost a specific in the nervous forms of influenza; as also in nervous headache, rheumatic toothache, and migraine. In these latter conditions, besides in renal colic, pyelitis, and painful vesical catarrh, he prescribes (with excellent results) doses of 8 to 15 grains four times a day.

Further advantages are that it is odorless and tasteless, and, because of its relative innocuousness, it is an almost ideal remedy

for children. The obstacle to the more general introduction of salophen, the author believes, has been its comparative costliness; this, though, he holds, should not deter any practitioner from prescribing it for such of his patients to whom price is of secondary consideration—and more particularly those whose chronic ailment demands a prolonged use of some analgesic. Besides, it should be considered as an alternant with other remedies of this class. (Recent quotations are: aspirin, $1.00 an ounce; salophen, 60 cents per ounce.)

THE PITUITARY GLAND AND ITS MEANING TO THE BODY

It has long been known that over-activity of the anterior portion of the pituitary gland (the hypophysis) stimulates tissue growth, especially of the skeleton. That curious disease which we know as "acromegaly" has been definitely connected with disorders of this gland. Usually when such cases come to autopsy, tumor growth of the hypophysis will be found. If over-activity of the hypophysis causes increase of skeletal growth, together with hyperactivity of the sexual system, conversely anterior-lobe insufficiency should inhibit skeletal growth and arrest sexual development.

The whole subject is discussed in a most interesting way in Harvey Cushing's classical paper on "Surgical Experiences with Pituitary Disorders" in *The Journal of the American Medical Association* (Oct. 31, p. 1516). Returning to the influence of the posterior lobe of the pituitary gland, Doctor Cushing says that while little is known of hyperplasia of this body, this portion of the gland appears to be more concerned with tissue metabolism than the anterior portion. When it is rendered inactive by disease or by compression, metabolic processes are checked; a high tolerance is acquired for carbohydrates, which are promptly stored as fat; there is drowsiness, insensitivity, slow pulse and respiration, with a lowered respiratory quotient, a subnormal temperature, low blood-pressure, and so on. This complex of symptoms, as has been pointed out, in some measure simulates the phenomenon of hibernation, a state in which the metabolic fires burn low, and one in which marked histologic changes have been shown to occur in the gland—changes which suggest a seasonal wave of physiologic inactivity.

It is interesting to learn that many symptoms formerly obscure as to their origin can be explained by over-activity or under-activity of the pituitary body; for instance, this is particularly true as regards many forms of obesity or its opposite, emaciation. Decided loss of flesh has followed the administration of posterior lobe extract over a long period; and, as already pointed out in CLINICAL MEDICINE (Feb., 1914, p. 110), polyuria or symptomatic diabetes insipidus may be caused by disease of the pituitary. Other symptoms to which such diseases may give rise are undue drowsiness, various psychoses, and sexual disorders, such as amenorrhea in women or impotency in men.

It is interesting to learn that a good deal can be accomplished by the surgeon in the treatment of diseases of pituitary origin. For instance, one of the most disturbing complications of pituitary tumor is the blindness or other visual disturbance resulting from pressure of the tumor growth upon the optical chiasm. In a few cases operated upon by Cushing the loss of vision has been arrested or even partially restored by removal of a portion of the tumor. The tumor is approached by the surgeon through an incision made beneath the under lip, the tumor site in the postnasal cavity being exposed by a speculum introduced at this point.

Doctor Cushing reports operative experiences with 95 cases, giving an operative mortality of 5 percent and a case mortality of 10.5 percent.

TREATMENT OF VULVOVAGINITIS IN CHILDREN

Gonorrheal vulvovaginitis in children occurs epidemically not infrequently in children's institutions, being transmitted probably by clothing, towels, washcloths, and particularly through the school lavatory. In the treatment of these cases, Barnett (*Arch. of Pediat.*, Sept., 1913) advises examination with the Kelly endoscope, removal of the secretion, and the application of Lugol's solution (compound solution of iodine) to the cervix and vaginal walls as the endoscope is being slowly withdrawn. These applications are to be made three times a week, while, in addition, the mother is directed to give daily vaginal douches of a 1 : 10,000 solution of potassium permanganate, introduced through a soft-rubber catheter.

Taussig, in *The American Journal of the Medical Sciences*, for October 1914, recommends applications of a 2-percent or even a 4-percent, solution of silver nitrate, the injections being made with an ordinary small

rubber-tipped urethral syringe. While these solutions seem strong, he has observed no untoward symptoms, and the results obtained are satisfactory. Both Barnett and Taussig recommend the administration of hexamethylenamine.

AN EPIDEMIC OF PARATYPHOID FEVER

There is no doubt that some, at least, of the mild epidemics of what we suppose to be typhoid fever really are of the paratyphoid type. Unless a careful bacteriologic diagnosis be made, it is not always easy to differentiate between the two diseases. Such an epidemic of paratyphoid fever occurred in the Boston State Hospital in 1910, and it is reported at considerable length by several observers in five different papers published in *The Boston Medical and Surgical Journal*, for October 8, 1914. To summarize these reports, the conclusions reached by the authors are about as follows:

The causative organism is shown to be the bacillus paratyphosus. The epidemic probably originated as a case of "meat-poisoning" developing in a male patient who had been a kitchen-assistant. Whether this patient himself infected the meat that served to spread the disease, or whether he was afterward infected by it, is not clearly demonstrated. Altogether, 30 patients were affected—23 women and 7 men. There were no deaths.

Careful comparison is made between the symptoms of typhoid and the paratyphoid fever observed in this epidemic. It was found that anorexia, diarrhea, abdominal pain, general malaise, and vomiting were not as common during this epidemic as they mostly are in an attack of typhoid fever. The initial fever virtually was constant, but it did not present the typical stepladder course of true typhoid fever. In 8 cases, there occurred a peculiar drop of the temperature to the subnormal in the second or third week. The total duration of the disease lasted from eleven to thirty-five days, as compared with thirty to forty-nine days in a similar epidemic of typhoid fever.

An interesting feature of these cases of paratyphoid fever was the complicating stiffness of the joints observed during the course of the disease in 19 out of the 30 cases described. The examination of blood revealed no hypoleukocytosis or a diminished number of eosinophiles, and it is suggested that this point may be of some value in differentiating from typhoid fever. In paratyphoid fever, the blood picture remains within the normal range.

There were few complications. In one patient lobar pneumonia and in another acute parenchymatous nephritis developed. As to sequels, all the patients, with one or two exceptions, complained of stiffness of the knee- and ankle-joints after getting up. Several complained of an unusual tendency to fatigue persisting after the termination of the attack.

The treatment seems to have been in the main purely symptomatic; that is, cathartics and enemata, to relieve constipation; intestinal and urinary antiseptics; tepid baths, to reduce the temperature; aspirin for the headache; and occasional hypnotics. The diet in the main was liquid and much the same as for typhoid fever.

RELATION OF CHRONIC GASTRITIS TO CANCER OF STOMACH

While more and more gastric ulcer and chronic gastritis are being credited with constituting the main underlying factor of gastric carcinoma, Konjetzny, of Kiel (Congress of German Surgeons; cf. *Muench. Med. Woch.*, May 19, p. 1146), has convinced himself that altogether too much importance has been attached to the former condition; for, he asserts, not to exceed 5 percent of cases reported have positively been traced to ulcers. Still, Konjetzny agrees with the irritation-theory of casual genesis, which assumes a precarcinomatous condition of the stomach-wall; this, though, principally being chronic gastritis.

Konjetzny explains the physical reasons why gastritis largely was overlooked by investigators. As for himself, he utilized material still retaining body-heat. Altogether 89 diseased stomachs were examined histologically in a most searching manner, and in 90 percent of these an intimate connection could be demonstrated between the consequences of gastritis (mucosa hyperplasias, polyps) and the carcinoma, as shown microscopically by the continuous passage of one into the other. Only in two instances (out of the 89) an undoubted ulcus-carcinoma was encountered.

In view of these definite findings, the lecturer emphasizes the great practical importance for the clinician face to face with chronic gastritis and the need of his paying more than common attention to torpid catarrhs of the stomach (especially in persons past middle life), as a prophylactic measure against cancer of the stomach.

Miscellaneous Articles

From the Firing Line in France

THE first British regiments that went over to the continent carried with them a large number of physicians who had been in active practice at home. Later, these were relieved and sent back and for a while there was a demand, that could not be supplied, for medical men to take their places. Then the Red Cross came into service and with it many volunteer surgeons. Finally, the English authorities settled back into their old custon of refusing to enlist in the regular service any medical man who had not an English degree, claiming that the qualifications of the latter were superior to those of any others. This threw out a number of American physicians whose college-diplomas were not recognized. These men were turned over to the Red Cross department, the English government, in this way, protecting itself from responsibilities and payment of pensions to those becoming injured or sick.

As the war went on, the Red Cross surgeons and the regular-army surgeons dropped all distinctions and as a rule worked together very harmoniously. The younger men, particularly those of the Red Cross order, are being kept on the battle line; the older ones remain in the rear and are engaged in the field hospitals.

While it is very difficult to make any correct estimate, there undoubtedly has been a heavy mortality among the surgeons, particularly on the firing line; a conclusion based upon personal observation, including the disappearance of surgeons one was accustomed to see about. An instance of this kind, coming under my observation, was that of a surgeon with whom I had been acquainted several weeks.

This surgeon called me one day to assist in operating upon an officer whose shoulder joint had been crushed by a shell. The hemorrhage had been severe and the work of tying the arteries and preparing the patient for transportation to the hospital in the rear required some time. The wounded soldier urged the surgeon to go with him in the ambulance. A Red Cross nurse, this surgeon, and the wounded man were placed in the ambulance and they started for the rear. A few hundred yards away a shrapnel shell struck the ambulance and literally tore it into fragments. There was nothing in the remains by which the bodies of the nurse, the surgeon or the patient could be distinguished.

At another time, a surgeon who had been assigned with me for several days at a particular point near the trenches was called to a bomb-proof enclosure, to give aid, when a shell burst and threw tons of earth into the enclosure, completely burying the soldiers and surgeons.

Other surgeons whom I have missed, disappeared suddenly but whether they were killed or wounded or called for other service I cannot say.

Shelling the trenches where soldiers are protected has been the characteristic feature of the last few weeks' struggle. Every now and then a call would come for ambulance surgeons to go to a certain point, and after a time, in which a roar of firearms, the rattle of the magazine-guns, and occasionally loud cries and cheers were heard, a stream of wounded would come pouring back. These were occasions when attempts were being made to break through the lines. While they were not successful, there must have been a terrible mortality. On one occasion, I and three other surgeons worked over eighteen hours in binding wounds up and directing the wounded to the hospital in the rear.

The most difficult work was the tying of arteries, which frequently required two surgeons or the aid of an expert nurse; the aim being to make the ligatures as perfect as possible for the time being. Other service was more or less temporary. Broken bones and lacerated wounds merely were cleansed as well as possible and covered with antiseptic dressings; then a note was pinned on to the man's garment, stating what had been done, together with the initials of the surgeon.

On one occasion, when the line had to fall back several miles, great confusion followed, and the disposal of the wounded men was

slow and difficult. Many were killed from shells. One field hospital practically was obliterated and probably both the surgeons at work were killed; at least many of the nurses and patients were destroyed. Later, the fragments of dead men were thrown into a trench near where the hospital stood and covered up. Many times it was extremely dangerous for the surgeons to venture near the trenches, to do so being at greatest personal risk.

On another occasion the wounded came in in such numbers that a special surgeon was sent to determine the disposition of the wounded: whether they should be sent miles away in the rear or whether they should be sent to the nearest field hospital. It was evident that the latter was crowded beyond its capacity and that it was necessary to send the slightly wounded far to the rear.

The extremely cold weather and the rains have added greatly to the patients' discomforts. A number of wounded have succumbed to the low temperature, being found dead in the field hospitals or on the firing-line. However, the continuance of the cold weather has happily brought with it a generous supply of blankets and warm clothing, things which were most welcome. Soldiers in the rear, out of the firing-line, could make themselves comfortable, but those in the trenches suffered severely. Coffee and food were taken to those men in tanks, and under cover as much as possible.

Wounded men in the trenches were assisted in every way to get out, and carried out of the extreme danger zone, where the field surgeon was waiting for them. It was difficult to have tents or to have any sort of covering that would attract the attention of the airmen and give the appearance of a battery or the gathering of a force of men. This then would be signaled to the German batteries in the rear, and in a very brief time shells would begin to fall into exact position. Of course, all houses and villages along the line of the trenches were the constant object for shelling from the German batteries. In foggy and rainy weather, the airmen seem not to be able to determine the position of men and batteries, hence, the shelling is irregular and falls wide of the intended mark.

On our side, probably the same tactics are being used; batteries are moved constantly from point to point and partially concealed, and for days an incessant bombardment is kept up. Then they move away. Companies of infantry constantly keep movin gup and down the line, and motor wagons with ammunition and provisions are in incessant activity night and day.

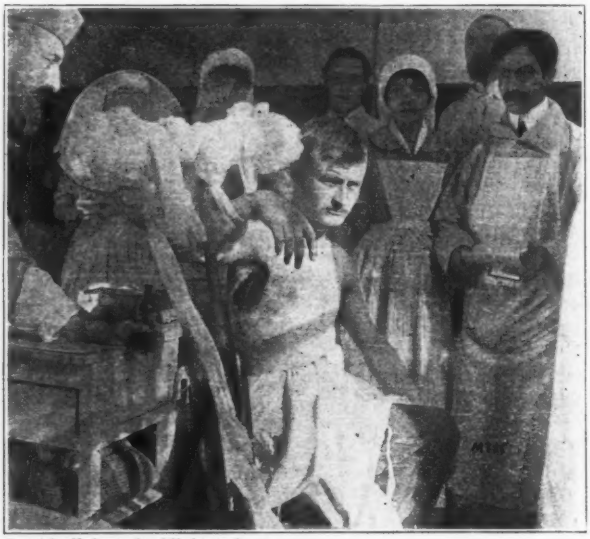
The poor surgeon shivering in the blanket in a shed or under a slight covering, with a little red flag outside to indicate where he was, had no conception of what was going on. The roar of the artillery in all directions and the stream of wounded that would come along in fits and starts were about the limit of his knowledge of events. Soldiers from the trenches would tell most horrid tales of mortality and themselves show injuries that were extremely perplexing, and all the surgeon could do was, to give the proper temporary dressings and see that these men were carried to the nearest hospital, if they could not walk.

Courtesy: Chicago Tribune

Wound said to be caused by a dum-dum bullet.

On one occasion, I was sent down to a clump of woods, to give aid to some German prisoners. They nearly all suffered from stab-, sword- or bayonet-wounds. Some of

the wounds were frightful in extent and magnitude, the bleeding, however, was slight. The prisoners expressed a degree of satisfaction at being captured that surprised me. The few who spoke English hoped that they would never have to go into service again. These men were captured by the Indian troops, who seemed to have unusual skill with the bayonet and sword. These wounded prisoners all went to the rear, the same as the wounded of our side, and probably received the same treatment, and no doubt very soon will be carried to England and housed in comfortable hospitals.



Copyright: Underwood and Underwood

Another wound said to be caused by a dum-dum bullet.

For several weeks my duties have been confined to a radius of about twenty miles up and down the front. At times the work would be concentrated along a range of a mile or more where heavy artillery fire was followed by infantry charges. On these occasions, we went back to the field hospital, so as to be ready to move this, and the inmates, at any moment. On two occasions, we were obliged to move backward a mile or more; but the next day we went forward again, the lines having regained the position lost.

As times go on, the perfection of the movement of troops, batteries, and kitchens, also the ammunition wagons, is evident, and wherever a charge is made and a new hospital established, ambulance-motors gather at once, and nurses and surgeons are on hand with a promptness that is astonishing.

One dark night, I went out to the trenches with a kitchen-gang of men who were distributing coffee and food, and saw the poor fellows lying under the dirt embankments in water and mud, and, yet, exhibiting a cheerfulness that was surprising. Food and coffee more distributed with great rapidity all along the line. Shells were falling occasionally and there was no time for gossip or exchange of opinions. Many of the soldiers handed me notes, which they had written in these distressing conditions, to be mailed. Most of the troops remained in the trenches for from twenty to thirty hours, then went back to the rear; but they were liable to be called any moment to support an infantry charge.

One night, while I was on the firing line dressing a crushed leg in the dim light of only an electric lamp, a petroleum bomb burst some distance away, when in that flash of light I saw a field covered with soldiers. evidently Germans concentrating for a charge. That was the only view I ever had of a battlefield, and those men were nearly a mile off, swarming down through a valley and up an incline, and over our trenches, to break our line.

Back at the field hospital I was ordered to go a mile north to the edge of a wood. Evidently the heaviest conflict was to be in that neighborhood. A temporary field hospital was put up back of the woods, and very soon there came in a stream of wounded men that required our entire attention until 10 o'clock the next forenoon. We heard that the enemy had been repulsed, with great slaughter, but we were so fully exhausted that all that concerned us was to get where we could have a few hours' rest.

The censorship of letters and of communications of any kind is becoming more and more severe, even as to us surgeons. The orders are clear, namely: write what you please, but under no circumstance send the letter away. Many soldiers, wounded beyond the possibility of again entering service, are pledged not to carry home with them any letters descriptive of the lines and locations or other matters that might conflict

with military demands. For the same reason, I may not mention geographical names. The fear of harsh treatment or loss of pension prevents many a man from carrying out news of this character. Names of towns and the rivers along which severe battles have been fought must not be mentioned.

An incident of the folly of undue enthusiasm was that of an American surgeon who somehow got into the service and was extremely anxious to do surgical work. He had some ability as an operator and was kept in the field hospital and in hospitals in the rear. By and by he grew impatient and insisted upon being assigned to the firing-line; but the first day out a shell tore off his arm at the elbow. Then he discovered that, beyond proper treatment in the hospital, this was all the experience he would get out of this war. He had been told to keep out of the danger-zone, but his eagerness to witness a real battle and to see men in deadly conflict drove out all caution; and now he will return home a sadder, even if not a wiser man.

The field-hospital men acquire a degree of caution and judgment after a little experience, and, while they are always exposed and liable any moment to be struck by a stray shell, they are alert to any threatening danger and quick to avoid possibilities of death and injury. Thus, for example, a battery of heavy guns shelling the enemy is almost certain to attract return fire, and this will make the vicinity exceedingly dangerous. Surgeons and dressers, and even field hospitals, move away from this zone very quickly.

So far as one can judge, the German artillery is very exact and accurate in the shelling of a selected locality. It is noticeable that after an English or a French battery has fired a dozen rounds or more it moves its position, and particularly so if there are any German airmen to locate them. Ammunition-motors drop their load of shells and move away as quickly as possible; also officers of high rank avoid these places, particularly when they have drawn fire from the enemy's gun.

Notwithstanding the fact that we are constantly tying arteries, dressing wounds, and relieving the pitiable soldiers, one soon becomes conscious of the limitations of this kind of medical service. In the field hospital, a little more exact field-work is being done, but even this is only temporary, and the wounded are sent as soon as possible to the regular military hospitals both in France and England; hence, are never seen again, so that the first attendant is unable to determine the results of the surgical service given.

Everywhere there is the anxious desire to get the wounded out of sight as quickly as possible, and to bury the dead. There is a plain psychological reason for this, for, although the wounded are more or less optimistic and often delirious in their exaltation, the effect of the sight of carnage on the fighting soldier is a bad one. In reading reports such as this one, it must be borne in mind that the writer must avoid many details. Thus, the surgeon's duty is simply to attend to the work before him and obey orders from the field hospital. He may describe the privations of the inhabitants of towns occupied, or speak of the vast numbers of women and children that are made homeless, but beyond this he is not permitted to express any opinion. I will mention, in closing, that many surgeons when not actively engaged in the field hospital, hold outdoor clinics for the refugees—and some of these folk are pitiful to the last degree. While but few are wounded, the majority are suffering from want of food, clothing, and comforts of any kind. Kind-hearted surgeons often stop and give aid to these poor refugees in some temporary way, but as a rule they have neither time nor energy left to do anything more than to take care of the wounded soldiers as they come in.

I will venture one prediction, which I feel sure will come to pass, namely, that this war will end soon. It may indeed last a few months longer, but the end is coming soon. The losses are so enormous and so terrible that the nations involved cannot endure them much longer.

"BRITAIN"

SUPPURATIVE NEPHRITIC LESION COMPLICATED BY ACNE

I wish to report a case that, while it has been very interesting to me, also may enlist the interest of readers of CLINICAL MEDICINE; and I shall try to be as brief as possible, yet hope to be thoroughly understood.

The patient is a farmer, aged 30, of German descent, with a good family history. The man ordinarily is of exemplary habits but occasionally he will get on a spree, and at these times he is not very choice about what he drinks. If he can get good whisky he drinks it; if not, he consumes the next best, and sometimes that is pretty bad stuff. He has kept up the periodical drunks ever since he was a mere boy.

About ten years ago, he had his first severe attack of acute suppurative nephritis—as it

has, eventually, proved to be—this trouble soon assuming a subacute and finally a chronic form. For a number of years, these attacks of chronic suppurative nephritis have occurred from two to four months apart, while once there was an interval of seven months. Preceding such an attack he experiences a heavy, dead ache in the back, with pains, more acute in character, extending downward to the inner side of the thighs and also to the testicles and penis. These pains are not continuous, but set in from time to time. After a day or two, the pain in the back grows more acute and radiates around into the region of the bladder. His suffering becomes so great at times that it requires two and sometimes three hypodermic injections of 1-4 grains of morphine and 1-250 grain of atropine to relieve him. Occasionally, when the pain begins to grow severe, he has to vomit repeatedly and to void urine often,

In from forty-eight to ninety hours, the nephritic abscess formed breaks and empties into the bladder, often rendering the urine so turbid and thick that it cannot be voided; I have seen it so thick that it would not flow through a medium-sized catheter, compelling me to throw into the bladder a quantity of (antiseptic) fluid sufficient to thin down the contents. Incidentally, there are several constricted portions along the urethra that interfere with the introduction of a catheter of large size, and I have never been able to introduce the cystoscope; at the hospital also they failed to introduce this instrument.

Our patient was badly poisoned at times from absorption of poison into the system, and he seldom was free from boils and sores. Also, when not taking tonics and blood-purifiers he would get badly run down and lose flesh. Under the microscope, the urine showed large quantities of pus, blood-cells, epithelium, and blood clots; bacteria were plentiful.

About two and a half years ago, he began to be troubled with acne on the face and neck. Despite all the treatment instituted, the acne grew worse, until his face was a sight to behold. At times his eyes were nearly closed by the swelling and I have removed necrotic plugs from his ears that left holes nearly through them. During all the many years this patient was under the care of different physicians, and although he was at the hospital twice, he never received more than temporary benefit.

For a year and a half this patient was in my hands and I put him upon tonics and urinary antiseptics and thoroughly saturated his system with calcium sulphide. By this plan of treatment I did succeed in lengthening the time between attacks and in keeping his general health up toward normal; still it had very slight effect upon the severity of his renal attacks and none whatever upon the acne. In fact, the acne gradually grew worse. The aggravation of the acne at last determined me to try bacterins and I procured three doses of a reliable make of mixed acne-bacterins. These were administered at five-day intervals, with the result that after the third injection a slight improvement was observable. Thereupon I wrote The Abbott Laboratories, and they sent me five empty tubelets, which I was to fill with the discharge from the pustules and mail to them. From these they made cultures, which they divided into 24 tubes, representing 24 doses of autogenous bacterin.

Upon receipt of this autogenous bacterin, I began to administer a dose every five or seven days, according to the reaction produced. To my great joy, the acne began to recede almost immediately, and by the time the seventh dose was injected it had disappeared absolutely. Twelve doses in all were administered, and not only did the acne disappear, but every sign of sores and boils. Best of all, six months now have elapsed—yes, eight months—and there has been no return of the renal abscesses. The man's complexion now is clear, his health is perfect, he is free from pain, and works every day.

While I am writing this article a number of questions present themselves to my mind which I wish could be positively answered; namely: (1) Was the acne the result of the suppurative nephritis? (2) Will these renal abscesses form again, or is the condition permanently cured? (3) Would a bacterin made from cultures prepared from the pus of suppurative nephritis cure the disease if not complicated by acne?

Judging from the urethral strictures some physicians claimed that our patient one time has had gonorrhea; but this the patient denies, asserting that never since he can remember did he have any discharge from the urethra. Knowing the man, his habits and surroundings, as I do, I cannot bring myself to believe that he ever had gonorrhea.

If, however, the suppurative nephritis should have resulted from an old gonorrhea, would bacterins made from cultures of the same acne pustules cure the nephritis?

I should be glad to have the editor and readers offer comments.

C. W. CANAN.

Orkney Springs, Va.

[This is a very interesting case and we hope that readers of CLINICAL MEDICINE will comment upon it, as requested by Doctor Canan. From the description given us, it is impossible to decide whether or not the acne was the result of the kidney condition. Some light could perhaps be thrown upon the relationship of the two foci of disease by a careful bacteriologic examination of the pus discharged into the bladder. It is not at all unlikely that a mixed staphylococcus infection, of a somewhat generalized character, was present.

Of course, we do not know whether the renal condition will manifest itself again or not; but it may. The patient should be watched closely for some time. A bacterin made from cultures secured from the pus in the urine should prove of value; but again it is impossible to promise definitely that it would cure. Much would depend upon the freedom of drainage. A bacterin will not remove pent-up pus.

Finally, we suspect from the description of the case that at some time this patient was infected with the gonococcus; the presence of a stricture of the urethra certainly indicates the probability of such an infection. If the gonococcus is still present in the genitourinary tract, then a bacterin made from that organism (presumably in association with other complicating bacteria) should prove of value.—ED.]

CORRECTION

Last month we printed an abstract of an article by Dr. J. A. Crisler, entitled "Local Anesthetic Used with H-M-C in 1000 Surgical Operations" (see p. 1102). We regret to say that through some oversight or mistake on our part, this article is credited to *The American Journal of Surgery*. It really appeared in *The Journal of the Tennessee State Medical Society*, July, 1914. p. 110. Our apologies to everyone concerned.

AN ANENCEPHALIC MONSTER: MATERNAL IMPRESSIONS

The last word about maternal impressions, or about "marking" a child during pregnancy, has not yet been spoken, and the question of its possibility bobs up as soon as the type of the newborn offspring deviates more or less from the accepted standard, or when fetal stigmata can be cited in connection with the psychic experiences of pregnant women.

It is said that the Greek women had sculptures, paintings or drawings of beautiful creatures in their rooms, and that this was the cause of the beauty of the race. If this is true, the remedy is easily applied; and I suggest a "September Morn" in every home.

Now for my case-report. I herewith present two pictures of a still-born child. Labor was normal and, as far as I could ascertain, life became extinct only a few minutes before birth. The back of the head was one bloody mass, without cranium, and when the child made its appearance I could not help thinking of a huge frog. The mother told me, and so did the father, that in the third or fourth month of pregnancy she had been frightened by frogs and I deemed it unnecessary to contradict their view in this case.

Anencephalic Monster—Front View

By the way, let me say that the "frog" type is a very common one, but only few of the mothers have had real experience with being frightened by frogs. This fact alone should give the theory of child-marking a very severe jolt. I have seen children perfectly resembling monkeys and thanked Moira (the Goddess of Fatalism) that it is only the exception. I would rather believe in the evolution theory of Darwin, that men formerly were monkeys, than to see men become monkeys once more.

D. ZWIGTMAN.

Niles, Mich.

[This child belongs to the teratologic type known as *anencephalus*. While these mon-

strosities are relatively common, and fall into a classification as definite, natural and simple as that of cabbages or beans, the idea still persists among the laity, and even among the profession, that the various anatomic

Anencephalic Monster—Side View

defects or duplications may be caused by maternal fright. There is no real evidence that they ever are so produced. Plenty of coincidences, to be sure, but no proof. Now I expect someone to tell me I am mistaken!—ED.]

NUCLEIN IN CANCER

In 1902, while I was engaged in general practice, a man 47 years of age applied for treatment, saying he had been treated by several of our most prominent physicians and surgeons for cancer, which was located about an inch and a half from, and on a line with, the outer canthus of the right eye. He had been told by each of these gentlemen that there was no cure for this type of malady. Feeling that there must have been provided a remedy for every ill to which man is subject, I began to wonder whether there was anything that would fortify the surrounding tissue against the further invasion of this rapidly destructive process, and then it occurred to me that nuclein, given intramuscularly, in association with iron and arsenic taken internally, might prolong life, if not effect a cure. Upon his second visit and after I had explained my views, I offered to give him the treatment, provided he would keep it up for a period of not less than six months, if necessary. To this he agreed.

The following morning I took this patient before one of our most prominent physicians and surgeons, a man of more than a national reputation, who declared: "It is simply folly to waste time with what you know to be a hopeless task. . . . He cannot last three months," and more to that effect. This was very discouraging, of course; but, anxious to try out my theory, I undertook the treatment.

The patient was given his first hypodermic injection of 10 drops of nuclein solution on the 10th day of September, 1902; and these injections were repeated for two months thereafter on alternate days. He was also given iron, arsenic, and strychnine, internally. Arsenic was pushed to the limit of toleration. The surface of the cancer was washed off several times a day, cleansed with a solution of peroxide of hydrogen, dried, and then a cloth covered with carbolized vaseline was applied and kept on until the next dressing. Owing to the extreme rigidity of the muscles on this side of the face, the man could not separate his teeth, so that he was forced to live strictly upon liquid food, for eleven months. He was unable to get even gruel between his teeth, until after he was, apparently, cured. This gentleman now resides in England, is 59 years of age, and is in perfect health.*

Encouraged by the results in this case, I determined to try my plan in other forms of malignant troubles, and, so, a few weeks later, began the same course with another patient, a woman 36 years of age, who had five tumors in her right and three in the left breast. These were first noticed several years before, but they had given her no special uneasiness until about seven months ago, when darting pains were first noticed, radiating in all directions and apparently all coming from the largest "lump" in the right breast. Finally the constant loss of weight and strength and the increased pain drove her to consult a doctor. I carried out my resolve.

Daily injections of nuclein were given, also iron, arsenic, and strychnine. By and by the latter drug was discontinued, when her strength returned. The treatment was

*After this gentleman was thoroughly cured, I took him back to the surgeon who had examined him on the day before treatment was started, and he exclaimed: "Indeed, the days of miracles have not passed. This is really one of the most wonderful cures I have ever witnessed or read about."

continued for four months, when she was instructed to take the iron and arsenic for six days out of every ten, for a period of three months, and then report. She was discharged as cured ten years ago. Less than a week ago this lady came to consult me about a simple digestive disturbance. I examined her breasts and found them both perfectly normal.

After this I was determined to try this course out in uterine cancer, and my success has been more than encouraging.

One case, that of a very estimable little woman who had allowed her trouble to be neglected too long before consulting a physician—as so many women will do—was the most stubborn I have ever undertaken, with any hope of success. Her discharge was so offensive that her husband could not sleep in the same room. There was no noticeable change in her condition during the first month, but some signs of improvement were discovered a few days later, and she was discharged after five months of constant treatment. This woman was 35 years of age. She was emaciated and had a dry, wrinkled, yellow skin. Today, nearly four years since she was cured, she has a beautiful complexion, is strong, well and happy.

It is not deemed necessary to report fully all cases treated, nor will I refer to those treated within the past two years, all of which I am satisfied are permanent cures, but sufficient time has not elapsed to warrant me in reporting them as cures. I do want to say, however, that in these later ones I have been able to accomplish as highly satisfactory results, in a much shorter time, owing to the fact that I have administered the solutions intravenously.

For a good many years I had been employing the intravenous method of treating many chronic diseases and found that I could effect cures in a far shorter period of time, so that now I never resort to the hypodermic road whenever it is possible to employ the intravenous method. My experience with the intravenous method of administering solutions in malignant disease does not date back far enough to enable me to say definitely, but it is my belief that cures can be effected in about a third of the time required by the hypodermic method.

During the twelve years I have been engaged in this work, I have had the pleasure of seeing many cases of superficial cancer, cancerous tumors of the breast and uterine cancer cured. More than 90 percent of the patients treated during this time were cured prior to October 1, 1911.

It is my belief that many cases of supposedly incurable uterine cancer are curable, and further that many thousands of women could be saved from the semiinvalided state caused by the too early, and often needless, removal of the womb and its appendages, under the belief that this procedure is the only possible means of saving life. When the disease is cured under my method, the woman is left with all her organs intact, as nature intended they should be; and this is what we all should work for.

Nowhere have I found this line of treatment referred to since I began it in 1902, until Dr. J. M. G. Carter read a paper before the section on medicine of the Illinois Medical Society at Springfield, May 15-17, 1906, in which he reports 5 cases treated along the same lines.

Carter gave nuclein in the form of protonuclein, internally, also gave the bromide of gold and arsenic. His results were fine, especially in the case of carcinoma of the sigmoid flexure—first seen and diagnosed by Dr. J. B. Murphy. This patient was again examined by Doctor Murphy, after the cure was effected by Doctor Carter, and he declared the tumor had disappeared. One and a half years after the cure was completed, this patient was found to be in perfect health.

Doctor Carter further states that for a number of years he has used nuclein with such success as to lead him to hold it in high regard as an agent for the treatment of malignant growths and other low dyscrasias. Also, he writes: "I have more confidence in the nuclein than I have in the bromide, chiefly, perhaps, because I had two cures in which I did not use the bromide, while I have had none where nuclein was not used."

In an extract taken from a paper written by Doctor Ernest LaPlace, which I have seen, the latter says: "The real efficient treatment of cancer must depend upon altering the nature of the tissues, so as to make them resist or in other ways be unsuited to the development of what may be the cause of the disease; until such a preventive or alterative treatment is found, we must acknowledge that the treatment of the disease is still to us a hidden secret."

Doctor Albert S. Atkinson, in an article appearing in *The New York Medical Journal*, has this to say concerning the value of nuclein in the treatment of cancer: "I believe that other treatment would be valueless without help from this agent."

Among the various treatments heretofore advised, there is really none that has proven of sufficient value to warrant the belief that

they will cure all cases; yet, I firmly believe that the idea advocated in this paper, with possibly some modifications or additions, will prove successful in a greater percent by far than any treatment at present known, and I trust that I may be spared to carry on this work until my contention is proven to be correct.

It must be admitted that the cautery has proved too much of an irritant. Caustics have proven valueless, except in cutaneous carcinoma, and a very large percent of these recur in from six to twenty-four months. Electrolysis is only transient and questionable in its results. The effects of serum treatment are as yet very doubtful. Radium is believed to be useful in most dermatoses, but was stamped by Doctor Rodman of Philadelphia, in his address at the meeting of the Southern Medical Association (held in Richmond last week). as a failure. Other authorities make the same assertion. The value of the x-ray has long ago been declared by many of most observant specialists to be worthless. Many of our very best surgeons agree with Czerny, of Heidleberg, that "surgery can never be an ideal cure." So that, after all these years, we must agree with Prof. F. C. Wood that "the attempt to cure cancer with drugs is, after all, the line on which we all are working."

My only excuse for not presenting these views before is, that every great and worthy advance that has been made in the enlargement of human knowledge invariably is looked upon as a daring innovation or as a fake; and, too, doing my work quietly, without assistance, and being forced to depend upon those who were inclined to come to me through the advice of the few whom I had treated, the number of my cases was limited. If I could have had the advantage of advertising, which many men enjoy, especially those connected with some medical college, I might have had at my disposal more clinical material and, thus, carried my investigations further. Still, I feel convinced that my total results could not have been better, having succeeded in more than 95 percent of curable cases.

BOYCE D. BROOKER.

Richmond, Va.

WHY NOT SUPPRESS ALCOHOL ALSO?

From your November number I learn that the Harrison Antinarcotic bill has finally become a national law and goes into effect March 1. A good law, and for a good purpose. But why, oh why, did not The American Medical Association and *The Journal of the American Medical Association* include the use of alcohol in their bill? They know, and all doctors know, that alcohol destroys scores of human lives to every death that can be attributed to the excessive use of narcotics.

[The American Medical Association did not frame this bill.—ED.]

I have practiced medicine for more than fifty years, but can recall not more than one who lost his life from the excessive use of narcotics; while those whom I have known to come to an untimely and disgraceful death through excessive use of alcohol are legion.

In order to make an intelligent comparison of the two evils under discussion, I have made a canvas of the proprietors of the drugstores of our city as to the number of persons whom they know to be habitual users of narcotics. Not one of them told me of more than three such persons. They also told me the names of the persons, which proved them to be regular "rounders," and showed plainly that there are not a half dozen persons getting opiates in this town of 12,000 inhabitants, to be used to satisfy a habit.

In contrast with this, we have 27 licensed thirst-parlors, to say nothing of a large litter of "blind pigs," all of which are very "wet" and doing a thriving business. It would take at least 4000 customers to keep all these places in business. This makes it look as though we have only one individual addicted to the opium-habit to 1000 addicted to the alcohol-habit.

Strange as it may seem, our state and national boards of health seem to be equally blind to the ravages of King Alcohol. For, while everybody else knows of the enormity of his death-toll and of the fact that William E. Gladstone, England's most illustrious prime minister, has said that "alcohol destroys more human lives than war, famine, and pestilence combined," still they are as silent on the subject as the sphinx.

Our boards of health, both state and national, make frantic efforts to stamp out hog-cholera and the foot and mouth disease of cattle—which is all right—but how passing strange that the lives of hogs and cattle should be so much more important to them than the mighty army of men who are continually passing down and out by the alcohol-river route. It is a shame that all these, who are leaders in the medical profession and in society, are simply afraid to express themselves upon this subject.

The trouble is, that they who become addicted to the alcohol-habit will fight for the

man who sells them the booze, and against the one who opposes him, even to the most ruinous boycott. Added to this is the fact that the government gives its permit to carry on the nefarious business, that there are many millions of capital back of it, and the most important additional fact, that its supporters and friends *have the vote*; all of which makes it a rather dangerous enemy to tackle.

If the hog-cholera and foot-and-mouth-disease germs all had votes at the general elections, they, too, would be immune from board of health attacks.

W. W. HAUSER.

Lincoln, Ill.

[Well said, and I have much sympathy with the position taken by Doctor Hauser. While I hope to see the improper use of narcotic drugs completely suppressed, as a matter of fact I believe that the number of drug habitues in the United States has been considerably exaggerated by some enthusiastic advocates of repressive legislation. Basing their conclusions upon the census of drug users made in Tennessee, the Bureau of Drugs, at Washington, has recently placed the total number of these unfortunates at approximately 70,000. A very large proportion of these are undoubtedly recruited from the negro population of the South and from the denizens of the red-light districts of our great cities—the weak and depraved who most readily fall victims to cocaine and similar drugs.

As Doctor Hauser so ably states, it seems that alcoholic immunity to legislative attack depends largely upon the political influence wielded by *the business*. Nevertheless, the doom of King Alcohol has been sounded, as witness the passage of several state-wide prohibition laws at the last election and the wiping out of the sale of liquors in Russia by a stroke of the Czar's pen.

But to return to the Harrison bill: It certainly will interest Doctor Hauser, and many others, to know that the United States Public Health Service has quite recently suggested the modification of the federal antinarcotic bill (now a law) so as to provide for records of sales of alcoholic beverages and medicinal preparations containing alcohol. We quote from a recent statement:

"In the Harrison Antinarcotic Bill now pending in Congress it is proposed to license druggists and others as dealers in narcotic drugs. This feature of the law will establish a precedent that should make it easy for retail druggists to secure an extension of the classification and provide, for a class of dealers in alcohol and narcotic drugs, the requirement that dealers in this class keep a record sufficient to show the amount of alcohol or alcohol-containing drugs purchased.

"A provision of this kind would serve to locate all dealers in alcohol and alcoholic liquids for medicinal or mechanical purposes, would suffice to class them apart from dealers selling alcoholic liquids for beverage purposes, would practically preclude the sale of alcohol for beverage purposes under the guise of medicine, and would afford to officials in prohibition or local-option territory an opportunity to enforce this type of legislation in a way hitherto impossible."

This suggestion on the part of the officials of the Public Health Service seems to me excellent, and I hope that the physicians of this country, who can wield a terrific legislative force, if they are only determined to do so, will get behind this idea, and push it hard. The columns of this journal are open for its promotion.—ED.]

ORDER THE INDEX FOR 1914

Every reader of CLINICAL MEDICINE who binds his copies—as every reader certainly should—is requested to let us know at once, by postcard, so that we can send him a copy of the Annual Index. For several years past we have not bound the index in the December issue of the journal, for two reasons: First, because it is quite difficult to complete it in time for the December number and do the work as perfectly as it is our aim to do, and, secondly, because we want to utilize the space that would be taken up by the index (from 24 to 32 pages), for reading-matter. However, we shall be delighted, in fact are anxious, to supply the index separately entirely without charge to anyone who is interested enough to ask for it. We urge you to send in your order at once—a postal card will do; being careful to write the name and address as plainly as possible.

SOME THERAPEUTIC SUGGESTIONS FOR AMERICAN DRUGS

Lloyd advises sanguinarine when there is tickling in the larynx, with burning, membrane red and dry; cough hard, secretion scanty, hard to raise; dose 1-32 to 1-16 grain every two or three hours.

According to Waugh, the indication for sanguinarine is the necessity for more expulsive power in coughing and greater sensitive-

ness of the respiratory tract; as, for instance, in old persons having bronchitis, or in young infants, when there is danger from the collection of secretion in insensitive bronchial tracts.

Lloyd suggests phytolacca in throat affections when there is: membrane pale, ashy-gray; lymphatics enlarged; fever present. It may be used both locally and internally. Phytolacca is best known as an effective stimulant of lymphatic absorption; in mastitis, adenitis, and other glandular affections; and for obesity.

Lloyd advises lobelia when there is profuse secretion in the throat, dyspnea and oppression. Dose 1-6 to 1-3 drop of the specific medicine every half hour, until relief. Since lobelia resembles emetine in stimulating mucus secretion, the foregoing is strictly a small-dose effect. Relief probably comes through the vascular relaxation that ensues if the drug is pushed to nauseation.

Since lobeline stimulates mucus secretion, it is indicated in the early stages of catarrhs, to loosen and relax the swollen tissues.

Lloyd looks upon collinsonia as a specific for the chronic laryngopharyngitis of public speakers—clergymen's sore-throat. A drop of the specific medicine every hour is the remedy.

Collinsonia is unknown to the compilers of materia-medica textbooks. The green plant is emetic in very small doses. It has some repute in menstrual disorders, as a general regulator, probably because of its relaxant properties. It has been praised in gravel, hemorrhoids, anal pruritus, catarrhs, varices, and in general as a digestant tonic. It is considered a tonic to the blood-vessels and muscular fiber. Shoemaker verified its antispasmodic powers and valued it, with aconite and morphine, above all other remedies in acute cystitis. He prescribed it for incontinence of urine in children, and when after urinating a few drops of urine remained, to soil the clothing by passive escape; also, for late stages of gonorrhea, for leucorrhea, and prostatorrhea.

Lloyd recommends drosera for dry cough, with tickling in the larynx, and reddened mucosa; give 1-2 drop of the specific medicine every hour. Waugh does not mention drosera, finding nothing about it in any except Eclectic works, and those statements too vague and uncertain to indicate the real virtues of the plant.

Plantago major, the common plantain, was highly prized by Beach as a remedy for venomous bites. Lloyd pronounces it "alterative, diuretic, antiseptic, astringent, anodyne, and demulcent. Indications: Diseases of the gastrointestinal mucosa, with pinching or colicky pains; dermatoses, with prickling, itching or burning pain; toothache and earache." It also is employed as a tonic to the vesical sphincter for children. The dosage is uncertain; Lloyd names 1 to 10 drops, but says the usual doses are 1-3 to 2-3 of a drop. There is a decided tendency toward Homeopathy in the Eclectic dosage and indications.

Kalmia latifolia, the mountain-laurel, is used for syphilis, but scarcely can replace salvarsan, without better evidence than has yet presented. Like most eclectic remedies, It is advised in a multitude of nonrelated maladies—fevers, inflammations, cardiac maladies, active hemorrhages, diarrhea, dysentery, jaundice, neuralgia, and very painful ophthalmias. Kent gave it for the pains in the left arm attending valvular heart disease.

Mangifera indica is recommended in hemorrhages before, during or after parturition; especially for passive bleeding.

"W."

THE SULPHOCARBOLATES IN TYPHOID FEVER

In my private practice, I had learned to rely upon the sulphocarbolates as an intestinal antiseptic and had used them with success in typhoid fever, so that last fall, during an epidemic of that disease in a state institution where I was assistant physician, I employed them with entire confidence and with what I consider gratifying results.

As soon as a patient presented symptoms of typhoid fever, I gave calomel, followed usually by castor-oil; then, when the colon was unloaded, I began with the sulphocarbolates, giving 5 grains every two hours day and night, when the patient was awake, while sometimes I prescribed 5 grains every hour for a few days in the beginning; however, never waking any patient for his medicine. As most of the cases were of the constipated rather than of the diarrheal type, I ordered castor-oil every second day.

For nourishment, I gave broth, a small amount every three or four hours; at times giving also a little ice-cream. Formerly I used to prescribe a small amount of milk every three hours; and, in fact, I believe that in protracted cases it is good policy to do so, as the milk is needed to keep up the patient's vitality.

Whenever the temperature went above 102.5°F., I sponged with cool water; in cases

where the temperature went above 103°F., I used ice-cloths and applied an ice-bag to the abdomen.

Almost all of the inmates and most of the employes had had the typhoid vaccine the summer previous to the outbreak, so that a good many of the persons who came down with typhoid fever had been vaccinated; but my experience is that, when vaccinated persons contract typhoid fever, the course of the disease and the ultimate outcome do not depend upon prophylactic vaccination, but upon the treatment carried out in each individual case. This means that the typhoid suspect be put to bed immediately and kept there until the fever is over, regardless of any vaccination.

The only fatal case I had was that of a young man who had been vaccinated but who was allowed to go about his work in that tired, run-down condition that so often is the forerunner of typhoid fever; too great reliance being placed upon the vaccination.

There were several patients whom I treated, whose temperature was elevated in the beginning, but all responded to treatment. I had one particularly trying case, that of a young man employe, about twenty-six years of age, who became sick a few days before Christmas, and who was not up again until the following March. He was a robust, healthy young fellow, but walking around with a temperature of 103 degrees, this later rising to 104 degrees. This man had not been vaccinated.

I didn't have the sulphocarbolates in the beginning, and, so, used salol until I could get a supply of sulphocarbolates. There were many disturbing factors that tended to a mental unrest—always a serious menace in typhoid fever. At about the third week, there was a hemorrhage of moderate degree. I gave powdered opium and lead acetate, placing the patient upon his back, enforcing absolute quiet, and restricted the diet to a few spoonfuls of broth for the first twenty-four hours. I followed this treatment with larger doses of bismuth subnitrate, hoping to coat the inflamed intestine; also placed an ice-bag upon the abdomen.

This patient would not use a bedpan, and the hemorrhage occurred while he was on the slop-jar, following a dose of castor-oil. The hemorrhage occurred about noon of a Monday. I didn't try to move the bowels again until Saturday forenoon, when a full dose of castor-oil was given, and with satisfactory results. During this week there was considerable tympanites, that was relieved some by inserting a high rectal tube and allowing it to drain into a bedpan. This was followed later by enemas of soapsuds and oil of turpentine, to relieve gaseous distention. When given but once a day (preferably in the evening, to promote rest), I ordered for a short time three tablets of the sulphocarbolates every two hours; crushing the tablets and giving with them a small amount of bismuth subnitrate.

The heart remained good during the greater part of the disease, averaging from 80 to 90 beats, and of good volume. I think I had to contend with reinfection from the gall-bladder; for, while in the beginning of February the patient had a temperature of 100°F. in the morning, with corresponding evening rise, it suddenly jumped to 103 degrees, going to 104, with a pulse of 100 and weak and compressible. This occurred twice, when the same routine was being followed, so that I can only attribute it to gall-bladder reinfection. Small doses of strychnine were given during this period, also whisky, egg-nog and malted milk, the patient's vitality being very low. It surely was gratifying when all danger of relapse was past. The diet in all my convalescents was most carefully guarded.

C. Edith Maxwell.

Rockland, Ida.

THE ASSOCIATED SYMPTOMS OF TUBERCULOSIS

It is passing strange how accurate most general practitioners are in the diagnosis of infrequent and rare diseases, and, yet, how dull they are in recognizing tuberculosis, the most common of all diseases.

Our doctors can diagnose cancer of the stomach, although they never saw one; an aneurism, though they can observe only the symptoms; appendicitis, by the associated symptoms; gall-stones, by the clinical history and the symptoms; meningitis, not by seeing the germ, but only by the symptoms; gonorrhea, not usually by the gonococcus, but by the symptoms; diphtheria, not by a bacterial diagnosis but by the membrane and the symptoms. They recognize croupous pneumonia and bronchopneumonia and make a differential diagnosis, not by the germs but by the associated symptoms; malarial fever, not by examining the blood for plasmodia but by the symptoms. And thus on and on. But when it comes to tuberculosis, the commonest of all the diseases, the physician wants to wait until his patient begins to break down

and spits up the germs, so that he may see them under the microscope, before making his diagnosis.

If our works on practice and our medical teachers fail to do their duty on this subject, authors and teachers should awaken to a sense of their duty and should see to it that the early diagnosis of tuberculosis is clearly described and thoroughly mastered by the student.

Away back in the nineties, in his *Journal of Tuberculosis*, Dr. Karl von Ruck gave us such a comprehensive and accurate pen-picture of the associated symptoms of tuberculosis that it never will be surpassed, and should become a classic. By these symptoms one can see and recognize tuberculosis afar off, and as a rule not even a physical examination is necessary for a certain diagnosis; nor need the tubercle bacillus be demonstrated in the sputum or other secretions.

The physical and the bacterial diagnosis are merely confirmatory of the associated symptoms, and, with all three positive, you are three times certain of your diagnosis. But never should you wait to "see the germs" for a diagnosis, for they are only confirmatory, and not necessary any more than seeing the pneumonia-germs, while, moreover, your patient may be over the dead line before you find the pneumococci.

The knowledge of these associated symptoms has proven so valuable to me that I repeat them here for the benefit of those who may not be familiar with them. In their totality, the symptoms are so complete, so comprehensive, and, yet, so plain and simple that no physician or even a layman can make a mistake in his diagnosis without ever confirming it by a microscopical examination.

Here are the symptoms:

1. Pallor.
2. Often bad color of skin.
3. Below normal in weight or excessively over weight.
4. Easily fatigued.
5. Indigestion.
6. Torpid liver.
7. Sluggish bowels.
8. Nervousness.
9. Nervous, irritable or weak heart.
10. Easily taking cold.
11. Slight hacking cough.
12. Catarrh.
13. Sleep poor, not refreshing; getting up tired in the morning.
14. Easily becoming hoarse.

Taken separately, these symptoms mean no disease in particular and may be found in various affections; but, taken collectively and finding the majority or all of them associated in one person, they mean but one thing, and that is, tuberculosis. Not every time may you locate the spot, but you are dead sure that it is somewhere in that individual; it may be in the lungs, lymphatics, bones or in the peritoneum.

Let me repeat: whenever you find a greater number of these symptoms associated you can be absolutely certain of tuberculosis being present; and you need go no further.

But usually you may very easily confirm your diagnosis by a physical examination. If the patient has a cavity, his sputum will carry the germs and further confirm you—but don't wait to see the germs in order to make your diagnosis, no matter what may be the trouble with your patient.

Von Ruck's pen-picture of the associated symptoms always bobs up between me and my patient and with it clearly before my mind, I am the better able to grapple with the present trouble and to guide my patient back to health. Since I studied the article in the *Journal of Tuberculosis*, it has been so clear to my mind, that it is really a part of me. It has been so valuable to me in my general work that I repeat it as best I can, and I urge upon the profession its study and appropriation as of great value and importance.

The great beauty of the associated symptoms is, that they are equally useful and applicable to all forms of tuberculosis, in all the stages, and in all locations, whether it be tuberculosis of the lungs, lymphatics, bones or peritoneum.

Rising Star, Tex. B. F. TERRY.

[Doctor Terry's article was submitted to Doctor Achard, of our editorial staff, who makes the following comment:

"Doctor Terry for quite a long time has urged both Doctor von Ruck and me to republish these associated symptoms of tuberculosis, upon the recognition of which he justly lays so much stress for the early diagnosis of tuberculosis. At my request, he finally consented to say his own say, and I can only confirm his opinion of the importance of these symptoms, if in a given case they are present collectively or in the larger proportion.

"I believe that nowadays comparatively few practitioners wait to find tubercle bacilli in the sputum before making a diagnosis of pulmonary tuberculosis. It is recognized that, when these actually appear, the lesion already is an open one; the diagnosis then is

one of phthisis, and no longer that of simple tuberculosis.

"For all that, the importance of heeding the early symptoms described by Doctor Terry and of acting upon the indications suggested by them, cannot be overstated. During the early stages of pulmonary tuberculosis, when no complications exist and when no, or but little, tissue has been destroyed, the restoration of health generally is a comparatively simple matter, and it is here that specific treatment by means of a vaccine (not "tuberculin") that contains all constituents of the tubercle bacillus promises the best results.

"Once a bacterial diagnosis of sputum is positive, the problem becomes much more difficult. I, therefore, endorse Doctor Terry's enthusiastic description of what the associated symptoms of tuberculosis may mean to the practitioner and recommend their careful study and observation."—ED.]

A "FAIR EXCHANGE": AN OFFER OF FREE SERVICE

I have had a real treat recently. Our friend and frequent contributor, Dr. A. L. Nason, of Maben, Miss., sent us a sample of genuine cane-syrup. Everyone in the office had a chance to taste of it, and the result was so gratifying that we have chipped in among us and ordered a full barrel. Another friend of ours, Mr. L. Galloway, of Province, Oklahoma, sent us some pecans, These, also, were sampled by our boys and girls and pronounced good. Result—an order for 500 pounds.

These two experiences have been so satisfactory to, us and, I hope, to these two friends, that someone has suggested that I print their names in CLINICAL MEDICINE and give others a chance to get some of this good homemade syrup as well as those delicious pecans. Also, the suggestion has been made that there be opened in the columns of CLINICAL MEDICINE an opportunity for exchange between doctors in different parts of the country. For instance, some Florida physician may want to dispose of his oranges direct by mail. A Connecticut man may be interested in the manufacture of jackknives; a California physician in olive-oil or walnuts; an Oregon or Arkansas man in apples; a Wisconsin physician in seed potatoes; a Vermonter in maple-syrup; a Texan in rice. Why should not these different men arrange for an exchange of commodities, either for money or other things they may want, thereby cutting out the middle man, to their mutual advantage.

Just to give this idea a trial, we will publish free in the next few numbers of CLINICAL MEDICINE, in a column especially provided, any offerings of this kind which subscribers may feel like submitting. Of course, there must be a limit. If we are snowed under with requests of this kind, it may eventually become necessary to make a small charge for this service; but for the present we offer it free, for the good of the "family."

HOLD FAST TO THE OLD

I do not believe the profession, as a whole, recognizes the great value of religiously preserving and filing away all their medical journals. The men are eternally looking for the new. Its the same way regarding new remedies. "Bark is a good dog, but Holdfast is a much better one" applies in the practice of medicine as well as in other things.

One well-tried remedy is worth a dozen or more of the other kind, until their worth is well proven—and private practice is not exactly the field to prove them in, either.

My associations with my old files of THE ALKALOIDAL CLINIC and THE AMERICAN JOURNAL OF CLINICAL MEDICINE are very pleasant, for I am always finding something new in them, and, then, again, the *truth never gets old*—even in medicine.

Tulsa, Okla. A. H. COLLINS.

[There's a world of good advice in the doctor's suggestion. I would rather have a carefully indexed ten-year set of bound volumes of CLINICAL MEDICINE, and of one or two other good journals, than any medical encyclopedia ever published. You can find more of the kind of stuff that will actually *help* you in these volumes than you can in a whole case full of text-books.—ED.]

EMETINE IN PYORRHEA

I am using emetine hydrochloride in pyorrhea, hypodermically injected in the subcuteneous cellular tissue; giving 1-2 grain daily for three successive days, then every fourth day until the gums are entirely healed and the teeth become tightened in place. I also employ it locally to the pockets and walls of the pockets by means of a syringe, using a 1-2 percent solution. The patient is directed as to the care of the mouth and teeth along prophylactic lines and told to wash the mouth after every meal with a good antiseptic wash, followed by a few drops of fluid extract of ipecac, applied to the gums

and teeth by means of the toothbrush. The permanency of the effect is due, I am sure, to the fact that the pyorrhea-pockets are treated locally until they heal.

Instrumentation is absolutely necessary in every case. Tartar scales must be removed. Ill-fitting bridges and crowns must be removed and projecting fillings must be polished smoothly to the tooth before the general treatment is begun, in order to do away with all conditions that tend to produce irritation and prevent granulation.

I believe emetine saves me much time in treating my cases. While it is too early to make a very definite statement as to permanent cure, the results I am having with a number of cases under my observation are gratifying, and there seems to be good reason for believing that cures can be effected in at least a certain proportion of the cases.

J. R. RICKER.

Houston, Tex.

[This short report is from a dentist, and it is one of several from men who have tried emetine in pyorrhea and been pleased with the results obtained. That it will actually cure the disorder is proven. That it will cure every case, of course, is not proven; still, emetine seems to be the best thing we now have for that purpose. Local treatment is required for loose teeth, receding gums, and inflamed pericemental membranes. Bass reported benefit in 100 cases treated with emetine, given in 1-2 grain doses hypodermatically; and many of these were quickly cured by this remedy in a really remarkable fashion. Read his report, published in CLINICAL MEDICINE last month. See page 1106.—ED.]

ANOTHER JOLT FOR THE DISPENSING PHYSICIAN

In a letter written to *The Dallas* (Texas) *Morning News*, a copy of which has been sent us by one of our subscribers, Mr. Walter D. Adams, President of the Texas Pharmaceutical Association, refers to "the dispensing evil" in the following language:

> Then there is another evil, possibly not so germane to the subject under discussion, still it is a contributing cause to the evil; that is, the dispensing physician. Is not the incentive greater to prescribe habit-forming drugs if the physician dispenses his own drugs and gets the extra profit from them? First-aid remedies, such as calomel, quinine, and so on, can safely be left for physicians to dispense on call, but the best interest of the public demands that at least all poisons, or prescriptions into which any poisons or narcotics enter, shall be dispensed only on written prescription and this filled by a licensed pharmacist, preferably someone other than the party writing it. A careful pharmacist is sometimes a safety check between the physician and the undertaker. I know by my own experience that I have detected errors that would have cost the life of the patient if filled as written. If the prescription is on file, the medicine dispensed must respond to an analytical test if necessary and it is possible thus to trace the mistake and locate the blame. If a physician dispenses his own medicine to his patient, treats the case and writes the death-certificate, where is there any check upon the incompetent or malicious? That there are some reputable physicians who do their own dispensing is not sufficient reason why dispensing should not be regulated, so that the acts of the dispenser may be subject to inspection.

So, there are "some reputable physicians who do their own dispensing!" That is something conceded, anyhow.

We wish to commend much that Mr. Adams says with regard to the necessity for control of the sale of the narcotic drugs, especially by pedlars. More rigid regulation is desirable; yet, we would warn the physicians of Texas and other states to be on the lookout for legislation affecting their interests. In new state legislation the recently enacted federal narcotic law may well be used as a model.

PLEASE NOTE THIS

Through an oversight, a portion of the form containing the war pictures in this number was run with the "copyright notice" omitted. As soon as this came to the editor's attention he had the matter corrected. However, please remember that all these pictures were supplied by Underwood and Underwood, New York, and being copyrighted, cannot be reprinted without their permission.

SOME USES FOR ACONITINE

A demonstration of the efficiency of the chemically pure and definite active principle of aconite, as against the uncertainties of any tincture of this drug, is easily possible to any clinician. The confidence which results from a little experience with aconitine is comparable to that felt with hypodermic medication, and that is not possible with tinctures.

The perfect safety of this alkaloid in careful hands is beyond question, as after millions of doses used not a single report has come to us of any accident or any danger from its intelligent use.

In that extensive class of pathological conditions demonstrated in part by fever, acon-

itine hydrobromide is the remedy of choice—dependable, accurate, certain, and safe, whatever the patient's age. Remember Shaller's Aconitine Rule for Children: one granule (gr. 1-800) for each year of the child's age, and one extra "for the glass," dissolved in 24 teaspoonfuls of water; the dose of this solution being one teaspoonful every ten to sixty minutes.

After the initial bowel movement, one granule (gr. 1-800) at 20-minute intervals, for 3 or 4 doses, will cause sweating and consequent cardiac rest; this resulting in a fall of blood pressure and pulse rate. Aconitine will restore circulatory equilibrium and positively reduce a pathologic pulse of 140, thus saving 30 to 40 beats per minute and so conserving the body resistance.

After the first evidence of response to aconitine following the frequently repeated doses, you maintain this effect by the less frequent dose, say, at hourly intervals.

To abort a cold, nothing is better or more accurate in medicine than aconitine to restore circulatory equilibrium. A sudden local congestion signifies a compensatory anemia elsewhere, and, so, relaxation of vascular spasm is the one object of treatment.

Vasomotor spasm usually accompanies neuralgic pain, and this frequently is dissipated by aconitine through its power of relaxing the spasm and relieving the congestion. For this purpose we frequently depend upon aconitine ointment, making inunction with a gloved finger, to protect the operator.

In cardiac hypertrophy, where treatment is indicated, aconitine will overcome vascular tension and thereby relieve the overtaxed heart. Here, of course, the dosage must only be just enough, and not the frequent dose required for acute conditions. An irritable heart is restored to balance by this alkaloid to a nicety not obtained by the guess-work therapeutics with the corresponding tincture.

While the single active principle meets indications never even approached by galenicals, we find that most often pathologic conditions are associated. Spasm of one set of vessels means corresponding paresis elsewhere. Congestion here means dilation there. Hence it is that the active-principle triad known as dosimetric trinity is so uniformly dependable. It contains aconitine, digitalin, and strychnine. Aconitine dissipates the tension of the congested area, strychnine adds tone to the area of relaxation and increases the respiratory excursus. While digitalin supports the heart and is somewhat antagonistic to aconitine, this is not sufficient to eliminate its antiphlogistic action. This is attested by the fact that the combination has been successfully prescribed by physicians since it was first introduced by Burggraeve in 1850.

While aconitine is indicated in any inflammatory condition, the only contra-indication to be considered is cyanosis. If this is present in the lips or fingers, the remedies indicated are, digitalin, caffeine, or strychnine.

Inasmuch as cyanosis practically never is seen in the early stage of pneumonia, pleurisy, peritonitis, or acute rheumatic fever, we can safely depend upon aconitine or the dosimetric trinity without fear, yet, with an assurance of results that imparts a confidence certain to insure success.

Chicago, Ill. FRANK B. KIRBY.

ON TREATING SCIATICA

In your comments upon Doctor Stanton's little article on sciatica, printed in the November number of CLINICAL MEDICINE, you say that "croton-oil is pretty energetic treatment."

Sure, and sciatica requires energetic treatment! I have heard a patient of 225 pounds' weight cry like a babe because of the agony, and this big fellow swore like a fiend when I struck the nerve with the point of my hypodermic needle. An old medical friend once described sciatica as being like four hundred toothaches. But, no, I have had one toothache, and if sciatica is like four hundred such horrors I surely should die under an attack.

> Where'er that place be priests ca' hell,
> Whence a' the tones o' mis'ry yell,
> And ranked plagues their numbers tell
> In dreadfu' raw,
> Thou, Toothache, surely bear'st the bell
> Amang them a'!

Sciatic pain is terrific, still, it is not so acute as a full-fledged toothache—not so sharp or agonizing. If it did equal only four toothaches, no mortal man could endure it. I have had sciatica, but not exactly as other men describe it; however, I was—and I am—quite well satisfied with that one experience. It seemed as if someone were breaking my tibia across his knees. Bad enough, yet, not the piercing, darting, agonizing, atrocious pain from an exposed dental nerve. Burns gets it about right. (*Vide supra.*)

How do you know sciatica? Lumbago, nephritic pains, and backache—all frequent the same region. As you know, the sciatic nerve is given off from the spinal column in

the lumbar region and, so, a doctor may be mistaken in his diagnosis. This is how I tell: I ask my patient whether the pain passes down the leg, along the path of the sciatic nerve. The patient may be directed to lie on his back. Then, if the thigh is flexed against the abdomen and the fore-leg upon the thigh, if the trouble is sciatica a quick pressure upon the leg will elicit intense pain at the point of exit of the nerve from the pelvis.

Now, what shall we do about it? Cure it, of course—if we can. I always have accomplished this; still, should I fail in my attempt, it would be no more than has been my lot in the case of other diseases, yes, no more than has happened to you. So, be not discouraged when you do fail.

Now, a cure may have been made public and been known to others for a long time, while this or that doctor may again discover the same himself. In that case, the latter is entitled to as much credit as is the man who first promulgated it. In other words, he is an original discoverer of the cure. As for myself, I have discovered that active purgation will cure sciatica of a certain kind.

Some time ago, a patron came to my office and said that he wished some more of those cathartic pills.

"Why?" I demanded.

His reply was:

"They cured my sciatica."

Several times he thus called for these cathartic pills; also, several of his neighbors have similarly called for them. I have had several happy experiences with this treatment. Unloading the bowel frequently does this work.

My usual method of treating sciatica consists in injecting 15 or 20 drops of chloroform down to the nerve, and once at least this treatment has effected a cure. In addition, I have had decidedly good results from strychnine and phosphorus, taken internally.

A man was standing on the edge of a high cliff when a terrific pain caught him in the hip-joint. He managed to catch hold of some projection and thus saved himself from falling to sure death; but he often thought it would have been better had he gone down, for the suffering from the sciatic pain was so intense. For three months this man was treated for rheumatism by other physicians, who gave him salicylates. Finally I was called in and administered the chloroform injection, made near the exit of the nerve from the sacrosciatic foramen. The pain recurred at the mid-thigh, and after an injection made there it made its appearance under the knee, and still later in the gastrocnemius muscle; however, after several treatments it disappeared entirely. It was a happy day for Tom when he was cured at last, and he promised to pay me $50. However, I'm still waiting.

M. G. PRICE.

Mosheim, Tenn.

CURRENT COMMENT BY A COUNTRY DOCTOR

Difficulties of the Old Doctor.—November CLINICAL MEDICINE opens with an article under this head. It is a timely subject well treated. The difficulties certainly are there; and they are a serious matter to the old doctor, just as they will be to the now young but soon to be the old doctor, and the back number if he does not keep in the vanguard of progress.

The old darkey preacher's sermon title, "De Sun Do Move," has become almost a classic. This old and illiterate negro summed up in a few words the fact that everything moves along on evolutionary lines. The "Bonny Brier Bush" and the "One Horse Shay" heroes still have their places. Places in literature commemorate the noble men of a past epoch of medicine. But this is the day of ductless-gland physiology, of antitoxin, of active principles, and of accurate dosage.

Because the most rapid change of ideals as well as advance in science which the world has yet seen is upon us, are the older men to be allowed to live in the past and use the obsolete armament of a former day? No! The people just will not "stand for it." "Old Doc" is all right as a subject for fireside evening reading, but in practice the populace begins to demand the man who counts a few blood-corpuscles, boils a little urine or uses a microscope, as the case may be, to make a diagnosis, and then takes a straight up to date therapeutic-rifle shot for the center.

When the writer was a boy, he possessed an old single-barrel "smooth-bore" shotgun, a cut-over muzzle-loading musket. It was loaded by pouring in a handful of powder, ramming down a portion of a newspaper, dumping in a handful of shot—quite likely treated with castor-oil to make them "carry"—then following with a "slug" or another part of the newspaper, and lastly placing a percussion-cap on the nipple. This weapon was the pride of its owner's heart, and he viewed "brich-loaders" with a considerable degree of suspicion, it being currently reported that they "spat fire." He still claims that it was a good gun; but what backwoods

boy of today would want to own that antiquated thing?

Also, only a few years ago the knowledge of the ductless-gland riddle was almost limited to the fact that the suprarenals were subject to some sort of change in Addison's disease and that the thymus gland disappeared in adult life. The muzzle-loading shotgun prescription must go, but there seems to be no reason why the Old Guard should go with it. The veteran has the advantage, if he will but adapt himself to the modern tools.

It is said that a certain sea-captain and his first mate were two of the ablest men who ever took a "windjammer" around Cape Horn. The days of sailing-craft passed. The winds and currents still operate under the same natural law. The fixed stars and the sun still serve to take observations by. The old master mariner, however, is the proprietor of a few lobster-pots and a leaky sloop. Most of his time is spent telling the glories of the skysail yard-clipper he formerly took around Cape Horn and in criticism of modern seamanship. The mate? Oh! he kept up to the minute, is sir, instead of mister, clean up to the bridge and can perform a valid marriage ceremony outside the three-mile limit; in other words, he has command of one of those complicated machines known as an ocean-liner.

Comparisons being odious, here is a parallel. Doctor Progress and Doctor Fogy started in about the same time. Even the definition of an acid has changed since either went to school. Only one branch of medicine remains the same, anatomy, and Doctor Progress bought a dollar quiz-compend when he found himself getting rusty on it and carried it in his pocket a while, so that he can now once more bound Scarpa's triangle. He has kept up to date and, without being a faddist, has followed the current of medical advance. Just as soon as anything seems worthy of further investigation he gives it his closest attention. Instead of narrowing down to a few medicines, he uses more and more. In fact, he multiplies the good old nux vom. by strychnine and brucine, and again by diverse acid radicles.

Doctor Progress is mighty glad the new doctor has had better training than he, much better at school; but he has had the bedside work of years and in any emergency is right there with the experience and hypodermic syringe. In fact, he can rely on pulse, reflex, and respiration, instead of upon didactic dose-training. He is pleased to meet the young doctor in consultation and enjoys so doing, likes to borrow a bit of his bright recent polish. Doctor Progress does not intend to move, but, if he does, he could probably rub up a few technical branches and get past the board, even if he does believe that his years of practice should entitle him to reciprocity. The doctor knows he cannot be here always and has no hard feelings against the next generation, but he is able to prepare for competition, and will do so in a dignified and honorable way. In other words, Doctor Progress is an up to date man. If he cannot afford as much as he would wish in the post-graduate line, he has sense enough to spend a few dollars for new books and medical journals, feeling that he gets his money's worth in the pleasurable pursuit of the advancing flow of scientific thought as well as in dollars and cents.

As for Doctor Fogy, times are too hard to buy new literature, and he would have no chance to read either books or periodicals if he had them. A younger set of Smart Alecks dominates the medical society, and the only reason he retains membership is because he has never been fired out for nonpayment of dues. Idle moments are spent in gossip. The Doctor talks about the new doctor, punctuating his remarks with little tales, relating to the laity how he cured diphtheria without "horse juice," and how, in general, his competitors are neither on a medical nor on a moral plane with himself. It is hard to say it, but Old Doctor Fogy has become a grouch as well as a guesser. He seldom calls for consultation, but, when he does, it is with the greatest difficulty that the man he calls can conform to the peculiar necessities of harmonizing professional courtesy with duty toward the patient.

Thank God, the guesser mentioned in the article above referred to is usually a kind-hearted and lovable man, and there are few who are grouches, also. But, there are some. However, that is because they have unknowingly lost sight of the true spirit of progress and incidentally become blind to the actuating principle of all things—eternal love.

Taking hold of the new is no disrespect to the old. Moses wrote the finest work on camp hygiene ever promulgated; for all that, if Deuteronomy were written today, it would mention and commend typhoid prophylaxis as practiced in modern armies.

On Modern Pharmacy and Proprietaries.—A visitor at the office not long ago glanced over the various bottles and other things in evidence and remarked: "Doctor! I do not see

why you have so many ready-made preparations about, since you are a pharmacist as well as physician."

The writer explained that it was quite possible that the fact of being a pharmacist made him more critical about the medicinal agents employed. We live in an age of machinery, and Messrs. Jones, Smith, Robinson & Co., Limited, can more quickly, cheaply, and accurately fix up one million nice soluble tablets ready for dispensing than could the writer a dozen crude ones. These gentlemen must either live up to their label statements, or take a long chance on what the negroes call the "jail-house"; not to mention possible loss of business from failure to do so. Incidentally, most physicians are too busy to do any needless work in connection with dispensing. This does not lessen the enjoyment of being able to work out the official assay for opium without the book, if one can, nor does it signify that an attempt would be made to perpetuate hydrofluoric acid in a glass bottle by a physician or pharmacist, but simply that it is better to take advantage of the modern means of production and distribution.

If all the world goes mad, including the United States, it will be time to skin off some bark and dig some roots, verify them, and, if all the available alcohol and prohibition-booze gives out, make infusions and give them hot (after all, not enough medicine is given in hot water). With all due respect to the hallowed memories of Thompson, Thomson, Beach, *et al.*, we live in a different period of evolutionary progress, a fact for which we are in part indebted to these same pioneers of *American* medicine.

Now as to the proprietaries. In the first place, with the exception of a very few definite chemical products made under patent protection of process or name, and having no precise equivalent obtainable, the writer uses none of this class of products; nevertheless, he believes that very many of them have their field of usefulness and that the reason why they have in many cases been such a success in a financial way is, because they have merit, and physicians, as a whole, have not devoted the amount of study to chemistry and pharmacy that they might have done. Many articles have been placed on the market with names composed of initial letters, vowels or syllables from their main ingredients, and some of them have done, and are doing, good work. They doubtless often have been used when the same drug or an active principle of it possibly would have been overlooked by most of us.

All questions have two sides, some more. To illustrate. Last spring, when the writer and his degreeless but capable partner were walking in the woods, she called his attention to a beautiful little flower.

It was sanguinaria canadensis. The partner remarked upon its beauty and purity of coloring; whereupon the writer said: "Mohr's 'Plant Life of Alabama' mentions the Warrior River Valley as one of its southern limits. It is a poppy; same family as opium-plant. Wish I were a working galenical chemist. I believe that, although it is official and used by all three schools, it has further possibilities. Opium has more than a dozen isolated active principles and comes from the same family." Now just suppose the writer had become convinced that there was money in awakening interest in a somewhat neglected, although recognized, drug and gotten financial backing while he exploited that pretty flower commercially; had combined it with a little pulsatilla and called it "pulla-san," or added something else to embellish the name. What then?

The question now is, Would a service be performed by putting this thing on the market? How many patients would it aid? How many physicians would it cause to look up the ingredients as stated on the bottle and get busy with the U. S. P. stuff? The fact that the writer has such poorly developed commercial instincts, that it is a matter of congratulation when he collects enough and dodges enough bad investments to come out even at the end of the year, has nothing to do with the virtues of the red or the white potent juices of the papaveraciæ. Again, is he justified in putting the preparation on the market, or would he be if possessed of a commercial instead of a botanic tendency?

The Journal of the American Medical Association comes to hand with a criticism of the English for substituting helicon for the German aspirin, correctly remarking that a prescription for acetylsalicylic acid fills the bill better than either name. Shall we blame commercial push for the fact that there was a market for this chemical under a trade-name? If I prescribe hexamethylenamine under a copyrighted name, who should meet the additional expense entailed upon the patient by my regrettable ignorance of pharmacy and chemistry? We are almost back to the country doctor exploiting the hypothetical "pulla-san."

It can hardly be denied by either the users of sanguinaria, or, better, its active principle sanguinarine, that under certain circum-

stances it is of the greatest service in respiratory troubles; and there is ample literature to corroborate this. That dry, atonic condition of the respiratory mucosa, with deficient secretion, "tickling" in the throat and the characteristic cough certainly calls for sanguinaria. There are numerous drugs which in small dosage are stimulating expectorants, but there is *only one* sanguinaria.

Pellagra and Peas.—Doctor Buck's remarks on pellagra, appearing in November CLINICAL MEDICINE, are really excellent. Also the comments by the editor. It is too soon to say with certainty that this disease is not caused by a contagion of some sort, and it is highly commendable to keep up the search for the "critters" which may be responsible, also for their intermediate hosts. However, the trend of investigation seems to be establishing strong evidence that pellagra is purely a trophic disorder, caused by lack of the "balanced ration," as the stock-men say.

Without advancing any specific theory as to the cause, other than the existence of cell starvation, with the resulting lessened resistance to all invading organisms, the writer follows, and advocates, a dietetic and symptomatic treatment. The usual sufferers from this disease are likely to be great eaters of corn bread and the classic "sowbelly," this ordinarily being used fried in its own grease, while limited as to quantity mainly by the resources of the family finance.

Going upon the idea of starvation through lack of quality instead of quantity, I recently insisted upon the only available article of diet anywhere approaching the protein ideal, namely—peas, just field-peas—principally in the form of porridge and reinforced with buttermilk when obtainable. This pea dish was continued as the main article of diet for quite a time; I never could find out just how long, as the patient yearned for her regular meals and became generous with herself before instructed to that effect. But, yet, after several months there has been no return of the trouble.

The medical treatment was addressed mainly to the alimentary tract. Papain was given early in the course, because of digestive insufficiency, and was continued for some time. Cholagogs of mild action were employed from time to time, chionanthoid seeming to be well indicated. A little arsenic was given, and calcium-creosote was not forgotten, while the sulphocarbolates came in for aid in keeping down intestinal infection and resultant toxemias. The symptom grouping was merely analyzed as nearly as possible, and what seemed the indicated remedy applied to meet changing conditions.

Correct the diet, not forgetting that cell starvation may exist even where a plentiful food supply apparently is at hand and of needed variety, then prescribe the indicated medicinal agents. Remember that caution against spread always is indicated in any disease not absolutely known not to be caused by specific contagious or infectious organisms, and even then, that like causes produce like effects, which necessitates hygienic and sanitary precaution, to prevent other attacks in the same family or community. This, in the writer's belief, sums up the treatment in the present state of our knowledge.

The liberal fruit and vegetable diet is good, but do not forget the possibilities of peas. The writer thinks that his next pellagra patient will get a course of the bacillus bulgaricus. If all the Bulgarians are killed off in the present European unpleasantness, we still shall have a good thing, with an enlarging field of usefulness, in the Bulgarian bacillus.

A. L. NOURSE.

Sawyerville, Ala.

"WHAT CAN THE DOCTOR DO FOR HIMSELF?"

In response to your request made in the December issue (first editorial) I will tell my own ideas as well as experience; and what I shall say applies to the mass of our physicians—the country doctors.

The greatest obstacle in the way of progress, professional, scientific, and financial, is the want of hearty co-operation. There is too much jealousy in the ranks of the profession. Many men are engaged in the practice of medicine who are morally as well as intellectually unfit. There are men among us who, I know, would rather see a patient die than call in a consultant. There are those who, for fear a consultation may be demanded, will rush a patient off to a hospital. There are a thousand and one petty jealousies and backbitings to which all of us have been subjected.

These things should not be; however, just as long as they continue there will be no harmony nor advancement in the practice of medicine in the rural districts of our country.

Let me illustrate my meaning. One time I attended a woman in confinement. My competitor, hearing of the case (he had previously at odd times attended the family) drove to the house a few days later, and in a

most unprofessional manner said to them that, rather than have the woman's life endangered by me, he would willingly have attended her without charge. Here is a young doctor who has settled in our community, whom time and again we have befriended, but who at the first opportunity endeavors to stab us in the back.

Something is decidedly rotten in the medical profession. Men of the caliber here characterized are unfit, utterly, and should never have been allowed to enter our ranks.

The medical profession of America is full of abortionists, of quacks, of drunkards, and all sorts and conditions of worthless men.

The question, then, grimly confronting us, is: What can the honest doctor do for himself?

Let me draw a pen-picture of the condition which should exist, and which, although I shall not live to see its realization, I sincerely hope the members of the coming generation of country practitioners will experience.

In every town where there are two, three or four physicians, these men should practice together; have a common office, but with separate consulting-rooms. They should amalgamate their capital, for the building, equipping and support of this institution. Each of them should specialize in certain directions, and then they should work as a unit in absolute harmony. Every community has a right to demand this harmony of its doctors; the doctors owe it. They should be ready for any emergency. Instead of rushing off a patient, when attacked by appendicitis, fifty or a hundred miles to a hospital, they should be competent and prepared to do the operation themselves.

Let us look at the results of such a combination. In the first place, these physicians must be gentlemen, in the fullest sense of the term. Any community would be justly proud of such an organization, and rightly so. The day is fast approaching when the medical profession perforce must unite, and not alone for the benefit of the community, but for their own protection, Such an arrangement would eliminate the quack, the patent-medicine vender, the abortionist. No dishonest doctor could withstand the opposition from an honest combination of physicians and an indignant public. Dishonesty would go to the wall. You would not hear Dr. A. speaking ill of Dr. B. Among the community the coterie would be known as "our physicians," and the man who would dare to reflect upon their honesty, integrity or ability, would receive a severe rebuke.

Now, doesn't this look nice — on paper? Well! it is possible, too. This combination would also solve the financial problem, because Mr. X. could not run up a bill with Dr. A., and belittle him in the eye of Dr. B., in order to get a few more visits for nothing. The surgical operation would be done at the patient's home, while, still better, the fee that otherwise would go to some distant surgeon could be divided among themselves. Also, the profits from the drugstore that would be conducted in combination with this organization would go into the pockets of the physicians—for honest drugs, instead of for patent medicines for which a gullible public is swindled out of large sums every year.

The moral uplift of a community wrought by honest men would be one of its greatest assets: sober men, ready and willing at all times to give the best they have, and to sacrifice, if need be, their very existence for the protection of the community against dishonesty and vice.

As the editor wishes to hear of personal experiences as to how success has been attained, I will "speak out in meeting"—not, indeed, that I have made any great success. What little success I may have attained has been accomplished in the face of a great deal of opposition and by hard work, by the installation of the best equipment I could afford, keeping strictly sober, and attending to business. Other factors were: collecting my bills so far as possible, letting the community know that I place a fair price upon my services, and always endeavoring to give to the best of my ability, value in return; never hesitating to call to my aid consultants, and chosing learned and honest confrères; always being anxious to learn from the man who knows more than myself—the man who knows it all is a dangerous commodity.

In addition, may I advise you to read good medical journals, pick out nuggets here and there and store them away—they always come into use. One particular idea gleaned from a medical journal has been worth many dollars to me. Read—and I say it again—read CLINICAL MEDICINE.

"DELAWARE."

A GOOD THING—LOOK IT UP

Look up the advertisement on page 59 (advertising section). Apparatus of the kind presented will help every good doctor to build up office practice. We know these people, know the quality of their work, and the integrity of their presentation.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

When fields are withered and the frosty hills,
  Wrapt in the New Year's mantle, o'er the vale
  Rise purple in the distance, and the gale
Has left the woodland sighing by loved rills
And meadows, where the summer woodbird fills
  The quiet air with melody, I steal
  And see the snow-wreaths lying like a veil
Above the voiceless waters. Winter chills
The pallid brow of earth; the wild flowers droop;
  The sparrows rest where late the delicate loves
    Of Nature's fondlings, breaking into song,
Thrilled with strange joy; the pasture's ferny slope
    Stays tenantless, and lorn Pan moans among
  The sad and broken arches of the groves.

—

On a bright, crisp winter morning, a few days ago, I went over to the beautiful natural park directly acrosss the street from my house in Attica. How exquisite and virginal the repose! It touched me like some perfection of music. Later in the day, when the influence still possessed me, I wrote the above sonnet. I felt as Alexander Smith must have felt when he wrote: "I would rather be remembered by a song than by a victory. I would rather build a fine sonnet than have built St. Paul's. I would rather be the discoverer of a new image than the discoverer of a new planet. Fine phrases I value more than bank notes. I have ear for no other harmony than the harmony of words."

I forgot for the time that I was a doctor. It might be well for all of us occasionally to forget our profession and think of other things than pathology. We doctors are continually standing on the confines of existence, welcoming the newcomer, bidding farewell to the goer-away. There is a tendency to allow science to crowd sentiment out of us. Charles Darwin, one of the greatest scientists of the last century, grieved in his later years that he had lost his appreciation for poetry and music and art. As a young man, he had enjoyed all of these, but for years he stretched his mind in other directions, and at the close of his career he had lost his appreciation for the high things of the spirit.

With the departure of the old year and the incoming of the new, we are prone to be haunted by restless memories that stalk like sheeted specters from the tomb. As we look back across the years, we can see that not one year has been free from mistakes. But we should forget the unpleasant things, the blunders of the past, remembering that the great things are still to come. The past with its sunlight and its shadow lies behind us, and to it we cannot return. Our faces are in the other direction.

We should be prepared to do greater, better things this coming year. The question we should ask ourselves this month is not, "What have I attained?" but, "How far am I reaching?" Are we reaching for something beyond medical science? Are we broadening out? Shall we miss all the divine sweetness of life, in order to "succeed" in medicine? Shall we shed home, family, relatives, friends, the ordinary human affections, poetry, art, music, good books, in order to be known only as great surgeons, or great physicians?

With these thoughts, you will pardon me, I hope, if I do not write today of disease and the treatment of disease, but finish this effort by expressing some thoughts in verse that, I trust, will be as valuable to you as a dissertation on some mental or physical malady.

I

Come, sacred fires, snatched by Promethean hand,
  And kindle deep and full the soul in me.
Touch into living verse, by thy command,
  These burning thoughts that struggle to be free.
  Awake the golden lyre in minstrelsy,
And, breathing in diviner harmonies,
  Call from its sleep the voice that lurks in thee.
Oh, lift thy trembling accents to the skies,
Borne on these wintry winds which musically rise.

II

Hear me, ye everlasting stars, that keep
  A jealous watch above the sleeping earth—
Ye tender skies, that mourn and even weep,
  Like a fond mother o'er her children's birth.
  Enkindle now on Poesy's sacred hearth
The fires that sleep within this mold of clay,
  Touched into truer, nobler life, give forth
This morning hymn that with Aurora's ray
Greets all the holy glory of the coming day.

III

Come, spirit of the night-winds and the streams,
Impart to me their melody and fill
With purest thoughts of field-flowers in their dreams
This earthly mind. If God, indeed, doth will
My feet shall share with them beneath the hill
Their holy pilgrimage—ye woodlands, bear
Aloft my song in fancies sweet and still.
Fold, fold me to thy breast, thou forest fair
And lift my soul within thy fragrant atmosphere.

IV

Ye fairy guardians of the brooklets, come,
And keep your loving watch beside the spring
That gushes from my heart, to find a home
In th' world's great ocean, guard this offering,
'Round whose refrain my deepest pulses cling,
And lead me where earth's sweetest violets
Their pure breath yield to welcome blue-eyed spring,
Where my beloved, her feet, the charming, sets,
And the keen butterfly the loving roses frets.

V

Shine softly, breathe o'er the regretful past
A breath of beauty, and in pity lay
Your angel hands upon its sleep and cast
The mantle of your loveliness. So may
This wintry darkness yield at last to day,
As Nature strews her lichens, exquisite,
To cover o'er the face of old decay,
Till all that is most heavenly and sweet
Appears new-born—the buried seed is requisite.

VI

This be my constant prayer while struggling on
For life's exigencies, which never rest.
May each hour bring its bliss to look upon
This glorious world that God with light hath blest
And with his holy thoughts has all imprest.
Like perfume may it stream below, above.
Oh, could I lay my head upon thy breast,
Pure fragrant earth, and near to Cupid's grove
Sing thy great song of faith, of beauty, and of love.

VII

We should not mourn. God lays on every breast
Some burden to be borne through earthly years.
Each deemeth his own heart the sorest pressed,
And none of all as bitter as his tears.
We should not let our sorrows and lone fears
Veil from our eyes the beautiful in earth;
For truth and Virtue reign, and Love oft cheers,
While hopeful Trust and a clear spirit worth
Glow with the fires of Love and Pity's gentle birth.

VIII

To lift the beggar's burden from his heart
And wake to life and joy his slumbering soul,
The fetters of the poor drug-slave to part
Till from his sorrow-stricken days shall roll
The shadow of temptation, to control
The passion-fires within us, and renew
Life's pristine purity—the snow-white soul
That clothes the immortal spirit whence it grew—
These shall make our journey beautiful and true.

IX

What are our tears, if through our pains we rise
To learn when sorrow is a diadem,
And that earth's poverty and cares and sighs
We may relieve; whom bigots may condemn,
And deem it sin to touch their garment's hem—
To save these from their patient suffering;
Or, if we help a single soul to stem
The tide of wo that want and penury bring—
What joy to heal the wounds left by oppression's sting.

X

'Tis joy to feed the hungry; to restore
To warmth and gladness whom the chilling breath
Of winter tortures; to relieve the poor,
And drive from wasted homes the spectre Death;
To deem no act, however low, beneath
Our happier lot, but lift in tears of joy
The meanest earth-mate—these shall be a wreath
Of love and beauty time can ne'er destroy,
And render pure and sweet life's eloquent employ.

XI

Let not religion's dogmas stay our feet
From Truth's clear pathway, nor the heart's behests—
That finite lead to what is infinite—
By the world's cant be stifled in our breasts,
What'er our lives with truth and love invests,
This fear not to pursue, though it shall be
To jeopard our deepest interests;
To sever the sweet hopes of Friendship's tie,
Or bring our earthly state from wealth to beggary.

XII

Seek virtue in pure deeds and charities
That claim the reverence of all mankind;
Let no base fear of men e'er close thine eyes
To Truth's sublimity, or Hatred bind
Thy tameless spirit, that with chains confined
Sickens and dies of grief—pure, bright, and free
The law of beauty in thy heart enshrined,
Which shall with sweetest virtues compass thee,
Revealing to thine eyes thy soul's divinity.

XIII

A law unto itself is a pure heart;
No monarch e'er shall dictate or restrain
Its course or from its radiant journey part
The freeborn spirit. Cowards hiss in vain
To clear its thought: their vengeance brings no pain,
Their scorpion tongues it treads beneath its feet.
They pass away. Still Truth and Love remain,
To make that journey beautiful and sweet;
For, a pure heart is Love, and Love is infinite.

With this brief message I bring this article to a close. During the present year I hope to be able to make this department of greater interest and value to the many friends whose acquaintance I have been making from month to month. Some of them I feel I know already. Others I hope to know—personally. To one and all I wish a Happy New Year.

Among the Books

HARE: "DIAGNOSIS"

Diagnosis in the Office and at the Bedside. By Hobart Amory Hare, M. D., B. Sc., Jefferson Medical College, Philadelphia. Seventh edition, thoroughly revised. With 164 engravings and 10 plates. Philadelphia: Lea & Febiger. 1914. Price $4.00.

"In the diagnosis of a given disease," says the author, "it is essential that the physician rest his opinion, not upon one or two symptoms, but upon a series of symptoms which, when put together, give him a complete, or nearly a complete, picture of the malady. It is as futile for a physician to attempt to base a diagnosis upon a single symptom as for an architect to attempt to determine the appearance of a building by seeing one of the stones which has been removed from its walls."

This volume is devoted to a plan whereby a recognition of the symptoms will lead the physician to a diagnosis. The symptoms considered in diagnosis are first discussed, and their application to determine the character of the disease follows. In other words, the book is written upon the plan which is followed in actual practice, namely, the upbuilding of a diagnosis by grouping the symptoms. Laboratory diagnosis is omitted by the author, leaving this to special works on that subject, so that the intention of considering symptoms, as they appear in the office and at the bedside, may be the better carried out.

WORKS UPON RADIUM AND RADIOACTIVITY

The Philosophy of Radioactivity, or, Selective Involution. By Eugene Coleman Savidge, M. D. New York: The Wm. R. Jenkins Company. 1914. Price $1.50.

Radium and Radiotherapy. By William S. Newcomet, M. D., Professor of Radiology, Temple University, Philadelphia. Philadelphia and New York: Lea & Febiger. 1914. Price $2.25.

Radium Therapeutics. By N. S. Finzi, M. B., M. R. C. S., Chief Assistant X-Ray Department, St. Bartholomew's Hospital, London. New York: The Oxford University Press. 1913. Price $2.00.

Practical Measurements in Radioactivity. By W. Makower, M. A., D. Sc., and H. Geiger, Ph. D., University of Manchester. New York: Longmans Green & Co. 1912. Price $1.10.

These four books on the subject of radium and radioactivity as applied to medicine really are complementary to each other, and together they compass the entire range of the subject from beginning to end.

The first two of these books, it will be seen, are by Americans, and the last two by Englishmen. Doctor Savidge's book treats of radioactivity wholly from the standpoint of its philosophy and rationale—an aspect of the subject which all-too-many practitioners of the therapeutic mode ignore or neglect, and thereby come to grief in their application of it; for, it is a well known axiom of mathematics that you cannot get more out of an equation than you postulate, and one hardly can make an intelligent use of or interpret radioactivity, unless he thoroughly understands the rationale and mode of action and the limitations of the force with which he is dealing.

The second book in the list, that by Doctor Newcomet, is on a more practical and utilitarian plane, but still quite general in character, expounding the theory and practice of radiology in its broad relationship to therapeutics. Of the four, this one is, perhaps, the most complete and comprehensive from the point of view of the practitioner; and, if only one of the group is to be selected, this would best be the one of choice. However, it contains neither the purely scientific exegesis nor the strictly technical instruction needed for a really expert use of radium and its emanations.

The third, Doctor Finzi's work, is devoted exclusively to the therapeutic application of radiology, but it deals with therapeutic principles rather than with applied therapeutics. It may be regarded as an excellent introduction to the therapeutics of radium and radium emanations. It deals with means and methods of administration, physiological, and pathological action, and principles of treatment of internal and superficial diseases. It

is written with the customary English clarity and straightforwardness.

Makower and Geiger's book, the last of the group, is purely technical, dealing altogether with methods and instruments of measurement. Neither of the authors is a medical man; both are physicists. It represents the extreme opposite end of the subject to that presented by Doctor Savidge, yet, of equal importance to him who would intelligently and expertly avail himself of radiology in clinical practice.

Outside of their practical value, all four books are interesting as exemplifications of the progress that has been made in the last year or two in radium investigations. Doctor Savidge's subtitle is a very happy expression of the physiologic role played by the rays in living organisms—Selective Involution. There, we think, is the key to the entire philosophy and rationale of radiology as applied to medicine. It furnishes us with a means of inducing and directing the process of involution; and, whatever may be the detailed application of the mode to this and that pathological condition, the availability and efficacy of radium as a therapeutic measure rests, in the end, upon its power to influence cellular involution. A clear appreciation of this truth affords a clue to the understanding of all the information and instruction contained in these and other works on radium and its therapeutics.

HUBBARD: "PRACTICAL SURGERY"

Practical Surgery: Diagnostic, Therapeutic, and Operative. By B. Roswell Hubbard, M. D., Professor of Surgery in the California Medical College of Los Angeles. Second edition. With numerous illustrations. Los Angeles: Young & McAllister Inc. 1914. Price $6.00.

In writing this book, it has been the avowed aim of the author to make it practical; and, in the pursuit of this aim, he has avoided long dissertations on surgical diseases and said little, if anything, concerning the treatment of morbid states. The surgical subjects receiving attention throughout the work are both general and special, and the treatment suggested is such as the author has found to be effective, both in hospital and in a private practice extending over a period of some thirty years.

The characteristic feature of the work is its surgical therapeutics. The author evidently is a firm believer in prescribing medicines in accordance with specific indications for them. When suggesting remedial treatment, he specifically names the medicinal agents which he believes to be indicated and plainly states the symptoms or other reasons for giving these remedies. On the other hand, he does not, by any means, subordinate the frankly surgical phases of treatment to his enthusiasm for medicinal therapeutics. The two are balanced with sensible discrimination.

The book should be a valuable one for the practitioner, who is obliged to deal with his surgical cases both from the standpoint of a physician and also from that of a surgeon; and, as a matter of fact, every surgical case has to be considered from this dual, or borderland, viewpoint.

CROSSLEY-HOLLAND: "PHARMACY"

The Pharmacy Handbook. By F. W. Crossley-Holland, F. C. S., Member of the Pharmaceutical Society of Breat Britain. New York: Oxford University Press. 1914. Price $2.00.

The title of this book is likely to be misleading, for, in this country at least, pharmacy is understood to refer to the compounding and dispensing of drugs and other substances for use in medicine, and this subject is touched upon in only the most cursory manner in the work before us. It would better have been named "A Handbook of Medicinal Materials and Newer Methods of Treatment for Pharmacists." The value of the book to the medical profession is problematic, and we imagine that those pharmacists who have an interest in books like this one would desire a more thorough discussion of the various topics.

The plea in the introductory portion of the book for closer cooperation between physician and pharmacist will certainly find an echo in this country, but we differ with the author as to the way in which this may be brought about. A good-sized volume, all by itself, could be written on the subject of the relation of the one profession to the other. On the whole, we are inclined to think that the work will not meet any particularly enthusiastic demand, in this country at least.

KNOWLES: "DISEASES OF THE SKIN"

Diseases of the Skin. Including the Acute Eruptive Fevers. By Frank Crozer Knowles, M. D., Instructor in Dermatology, University of Pennsylvania. With 199 illustrations and 14 plates. Philadelphia: Lea & Febiger. 1914. Price $4.00.

Dermatology, once a rather meagerly represented branch of medicine in current and permanent literature, has in the last few years forged rapidly to the front in both these fields. No one can any longer complain of a paucity of books on the subject. We have on our own shelves some dozen or more textbooks on diseases of the skin, and we do not pretend to any very complete library. And the notable thing about it is, that they are all excellent works, with very little to choose between them in the matter of merit.

Even yet, however, the subject is none too widely represented. It is one which bears a good deal of exposition, for it is altogether too little understood by the practitioner at large, and, withal, it is one of the branches of medicine in which the general practitioner is constantly called upon to be his own specialist.

Not being a dermatological expert himself, the reviewer, of course, is unable to undertake any expert criticism of Doctor Knowles's book; still, to his very ordinary judgment, it appears to be a good, sensible, practical aid to diagnosis and treatment. He is particularly favorably impressed with the illustrations, which, after all, play a large role in books on dermatology. It is really wonderful with what graphic realism these pictures, without any coloring, manage to visualize the various skin lesions, so that one's mental vision almost instinctively and infallibly supplies the element of color.

VISITING LISTS FOR 1915

At this season of the year, a selection of a visiting-list and account-book for 1915 must be considered by every physician. There are a number of good ones. For instance, we can recommend:

The Physician's Visiting List (Lindsay & Blakiston's), published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia. This excellent little book is entering the sixty-fourth year of its publication, and it seems to be as popular as ever. In addition to the usual pages for keeping the physician's accounts, it contains a dose table, information regarding the treatment of poisons, incompatibility, asphyxia and apnea, etc. The price ranges from $1.25 to $2.50, according to the number of patients per day or week, the cheaper book being for 25 patients, and the most expensive for 100.

The Practitioner's Visiting List for 1915, is published by Lea & Febiger, Philadelphia and New York. This also has long been used, and deserves all the popularity it has had. In addition to affording a simple and complete list for keeping records of daily practice, it also has much reading matter which is of value to the physician, including beside the dose table, a chapter upon therapeutic reminders and one upon the examination of the urine, and poisons and antidotes. This visiting list is made in four styles, weekly, monthly, perpetual, and for 60 patients. The price is $1.25 net.

Finally, we call attention to the Physician's Protective Accountant, published by The Abbott Alkaloidal Company. This book consists of 12 monthly visiting-lists and a leather-bound ledger. It is so arranged that the physician may have in his pocket, ready for immediate consultation, a complete statement of each patient's account. This book has been on the market for a number of years, and we can unreservedly commend it. The price is $2.50 for the complete outfit; but the parts may be secured separately.

BISHOP: "ARTERIOSCLEROSIS"

Arteriosclerosis. A Consideration of the Prolongation of Life and Efficiency after Forty. By Louis Faugeres Bishop, A. M., M. D., Fordham University School of Medicine, New York. New York: Oxford University Press. 1914. Price $3.50.

This is distinctively the age of preventive medicine. But it must be remarked that at the present time the conception of preventive medicine is rather one-sided. It has got no further than the idea of public prophylaxis. It concerns itself wholly with the prevention of those diseases which infest communities as a whole. It is, in fact, almost entirely a phase of sociology and economics, and scarcely at all of medicine. Such part as medicine plays in it is in the capacity of medical science and not of medical practice. And since infants and children are most affected by that class of disease which concerns the community; and middle-aged adults by that class which concerns the individual, it will be found that while infant mortality is being rapidly reduced in this and other civilized communities, the mortality of middle age is considerably increased. Without in the least belittling the value of the infant life, we are constrained to ask, is not the life of the mature adult, in the prime of his active usefulness and productiveness, at least equally valuable to himself and to the community?

Doctor Bishop's work, and the summary of it which this book presents, is his answer to

this question. As the net sum of all the invasions which decimate the ranks of infancy may be practically expressed in the term "infection," so may the sum of all the physical degeneracies which cut down the life and efficiency of the middle aged man be generically expressed in terms of arteriosclerosis. And an inquiry into the causes and prevention and treatment of arteriosclerosis is really an inquiry into the physical causes and prevention and treatment of premature old age and death. This is precisely what Doctor Bishop's book amounts to. It is a most valuable contribution to a most important branch of present day clinical and preventive medicine.

BRAUN: "LOCAL ANESTHESIA"

Local Anesthesia: Its Scientific Basis and Practical Use. By Prof. Dr. Heinrich Braun, Director of the Kgl. Hospital, Zwickau, Germany. Translated by Percy Shields, M. D., A. C. S. From the third revised German edition. Philadelphia: Lea & Febiger. 1914. Price $4.25.

When the first edition of this book appeared, several years ago, the subject of local anesthesia was one in which the general surgeon was not particularly interested. Indeed, it was not until the discovery of adrenalin, in 1901, that the progress of local anesthesia became assured, for without its use a local anesthesia sufficient for surgical purposes was impossible. Of late years, however, the employment of local anesthetics in place of general ones has become exceedingly common, thanks to the introduction of various improved agents and the efficient technical work of men like the author of this treatise; and the time is ripe for an authoritative work on the subject, both from a scientific and a practical standpoint.

No one is better fitted to write such a book than Professor Braun. He is, indeed, justly called the father of local anesthesia, and to his untiring, intelligent work must be ascribed, in large part, the wonderful progress during the last twenty years in its science and technic.

English-speaking physicians are greatly indebted to Doctor Shields for furnishing us a translation of this edition. As he very pertinently says, "The profession must, and will, accept a method of local anesthesia which has no mortality, and will use it in many cases which are today being operated upon under general anesthesia." We may be pardoned for taking to ourselves some little credit for furthering its adoption in this country.

CUTLER: "THE SICK-ROOM"

The Care of the Sick-Room. By Elbridge Gerry Cutler, M. D. Cambridge: The Harvard University Press. 1914.

A capital little manual, containing the gist of some public lectures delivered at various times by Professors Bradford, Ernst, and Cannon to the Harvard medical classes. It is precisely what its simple title implies—a homely, practical little preachment on the care of the sick-room, including the care of the patient's person. It is an exceedingly human little book, as well as being scientific. No intimate detail is overlooked in the art of making the patient comfortable and wholesome. Even the care of the hair gets its share of attention. "I well recall," we read, "the state of a patient's head in the early days of my practice, where no attention was given to the hair, for four days, during a severe fever. The days and days of hard work which had to be expended on that head will never be effaced from my memory." (We suspect that is from Bradford.) In most instances, the general practitioner has to be head-nurse, as well as medical attendant. He needs a little book just like this; and this is the one he needs.

HARRIS: "MOTHERHOOD"

Motherhood. By E. S. Harris, M. D., Independence, Mo. Published by the Author. 1914. Price 10 cents.

We have had many requests for just such a little book as this one—a little manual of instruction and advice, not too long or too technical, to put into the hands of the expectant mother for her guidance through the period before her in matters which pertain peculiarly to her own personal care and responsibilities. The author's object, as stated in his introduction, is to "so instruct maternity patients that they may be able to avoid so many indiscreet things, usually considered of little importance, but which are fruitful of so many evil results." There are only thirty pages in the book, and the price is but a dime, yet, it contains really all that a prospective or actual mother needs to know on the practical side of the subject. Our readers will find it an excellent little manual to recommend to their obstetrical patients.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6055.—"Persistent Uterine Bleeding." H. S., Idaho, presents a case that troubles him and upon which he desires advice. This is what he writes:

"This is the case of a woman 33 years old who became pregnant over a year ago, miscarried, and a physician curetted her uterus. After the curetment, she began to flow continuously night and day. This kept up for several months, but stopped last August until about November, when the bleeding began again. Since that time from three to five towels have become soaked regularly in twenty-four hours. The woman is of good physique in every way, eats well and sleeps nicely. Aside from this continual flowing, she is well. There seems to be some pressure somewhere, for she reports that at times the flow will gush out as if there were pressure behind, and it is in clots. The odor at all times is awful. I have made examination of the uterus three weeks ago, and, so far as I can ascertain, things are normal. I tried packing the uterus, placing the packing as far back as I could, but this does not stop the flow. I have used every method I know of to control the hemorrhage, but with no success. Do you think pituitrin will be of any benefit, and would this gradually effect a permanent cure?"

In view of the very few data offered and imperfect knowledge of the woman's intrauterine conditions, we regret being unable to express any positive opinion as to the cause of this persistent hemorrhage; nevertheless, we feel quite sure that a cure can be effected if a thorough exploration of the uterine cavity is instituted, and then the indicated operative procedure is carried out.

In the first place, doctor, you say that the woman became pregnant and miscarried. What caused the miscarriage? If the abortion was induced, it is possible the uterus was injured. If she had a chronic endometritis (and this is one of the most frequent causes of abortion), the same condition may now be responsible for the hemorrhages. It must also be remembered that the physician who curetted may not have done the work thoroughly. Pieces of retained placenta may remain in the uterus (especially about the cornua) for months. DeLee removed fragments of placenta nine months, and Playfair, eleven months, after abortion.

Above all, it is imperative first to ascertain the real cause, for, while menorrhagia itself seldom is directly fatal, the constant loss of blood results in anemia, destroys the patient's health, and renders her liable to death from some trifling intercurrent disease. A thorough examination would, of course, reveal the presence of polypi, pathologic conditions of the endometrium, and so on. It is probable in this case that dilation, thorough curetment, and packing of the uterus will promptly prevent the hemorrhage.

It would be well, perhaps, to send a specimen of blood to our pathologist for examination. The fact that the blood is expelled in clots and has a foul odor leads us to believe that the placenta was not entirely removed. In this connection, doctor, we would suggest that you read the exhaustive and extremely informative chapter on abortion and premature labors, in DeLee's new work, "Principles and Practice of Obstetrics."

However, we must not forget the possibility of an underlying hepatic, renal, cardiac or splenic disease. You do not state whether this woman was a primipara or multipara, nor do you give us any idea of her past history. The period at which she aborted should be definitely ascertained.

Under the circumstances, we do not think pituitrin or any other drug will prove of service. A definite cause for the hemorrhage exists, must be discovered, and removed if possible.

QUERY 6056.—"Chromium Sulphate and Methylene-blue in Sciatica." M. L. A., Indiana, writes:

"What has been your experience with chromium sulphate in sciatica? Is it used extensively, and with what success? Also methylene-blue—how about this in sciatica? I am now using a solution of quinine and urea hydrochloride, 1 percent, hypodermically. Have you used it, and what do you think of it? I should appreciate anything you may suggest."

Chromium sulphate has not been extensively used in sciatica; however, we are not really as yet thoroughly familiar with the action of this drug, and it is just possible that it might prove beneficial.

We must bear in mind that pain in the distribution of the sciatic nerve may arise from an actual nerve lesion or be a functional disturbance; that is, neuralgic. Should the condition be owing to a true neuritis, treatment must, of course, be of the most thorough character. Rheumatism (i. e., acidemia) is unquestionably the most frequent cause. Occasionally pressure from disease within the pelvis and of the muscular tissue through which the nerve passes is responsible.

You will find the salicylates, alternated with the iodides, most efficacious. Thorough elimination is, of course, essential. Counterirritation should be applied until the acute symptoms subside. General massage, the affected limb being omitted, is beneficial. To the affected area, methyl salicylate and guiaicol should be applied (guimethyl is equally efficacious), after the parts have been treated for a while with hot compresses wrung out of a saturated solution of epsom salt.

We believe you can secure better results from a few doses of blue mass and soda, or calomel and podophyllin, followed by rheumatic (Candler) and sodoxylin, with intestinal antiseptic and salithia (each morning on rising), and applications of guimethyl and epsom-salt compresses, than by any other available treatment.

If it becomes absolutely necessary to administer an anodyne, use H-M-C modified; never morphine alone. Do not let the patient know what he is receiving. The high frequency current (vacuum electrode) undeniably is useful. If you will give us a clearer idea of conditions you have to contend with, we may be able to make more definite therapeutic suggestions.

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QUERY 6057.—"Uterine Fibroid." F. E. J., Georgia, wants to be told "what one could reasonably expect to do with a fibroid of the uterus, about the size of a small grapefruit, with the use of calx iodata and saline purging. If," he continues, "alkaloidal treatment will accomplish anything, please give me complete instructions. I do not intend to resort to the knife if anything can be accomplished by means of medication."

It is a fact that uterine fibroids frequently yield to full doses of calx iodata. Since, however, we have become familiar with the action of chromium sulphate, we have alternated these two drugs, giving the iodine preparation for from fifteen to thirty days in ascending doses; then, after two days of saline elimination, substituting chromium sulphate for a similar period. It must be remembered that a subperitoneal fibroid is not so likely to yield as an interstitial, or even a subuterine one.

Subperitoneal fibroids, as a rule, are multiple, though occasionally a single nodule is seen. These tumors begin as sessile growths, but, as they develop and push the perineum forward, their attachment becomes more and more constricted, eventually distinct pedicles being formed. Occasionally this pedicle becomes twisted and the fibroid may become adherent and derive a new blood supply from one of the neighboring organs.

The interstitial tumor is the variety which yields most readily to medication, unless calcification has occurred. This latter change is more often observed in the subperitoneal than in any other variety.

We are not sufficiently familiar with the conditions of your case to venture an opinion as to the advisability of delaying operation; but, if the tumor is causing any trouble, we should have it enucleated.

If you can give us clearer clinical data, we may be able to comment more intelligently.

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QUERY 6058.—"Ingrown Toe-nail." D. F. M., Wisconsin, writes that he is anticipating excising an ingrown toe-nail (of the big toe) and intends to use a local anesthetic. "Please state," he writes, "the best kind to use. Also kindly let me know something about the technic. Do you cut under and over the nail? What kind of rubber band do you use to restrict circulation? Will one application of the anesthetic be sufficient to perform the operation? Do you of necessity sew the parts after the nail is excised?"

It is a difficult matter to remove an ingrown toe-nail painlessly without injecting an anesthetic into the tissues. Fairly satisfactory results may be secured by freezing

the matrix thoroughly with the ethyl-chloride spray, then seizing the nail with a stout forceps and removing with a pulling twist.

Cotting's operation consists in passing the knife at right angles to the plane of the toe-nail into the tissues and shaving off the whole of the soft parts, together with a narrow sliver of nail on that side of the last joint of the toe. The wound is left to granulate and a contracted scar is the result.

It is unnecessary to point out that the nail cannot "ingrow" in that locality again, for the simple reason that there is no tissue for it to grow into. The operation is radical and positively effective, but the patient will have a sore toe for some time afterward.

Another operation, the most simple one, is as follows: Anesthetize thoroughly by the usual method, especially at the root of the nail, then seize the nail in the center and twist it out, finally curetting away exuberant granulations. This operation is simple, traumatism is slight, and the resulting incapacity of very brief duration. A simple borated dressing is all that is required. A rubber band should be passed around the root of the toe tightly enough to shut off the circulation before injecting the anesthetic.

There is very little hemorrhage, and if the second operation described is done no stitches should be placed.

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QUERY 6059.—"Rodent Ulcer of Face." O. B., California, writes as follows:

"Can you suggest an internal remedy and also an external application for rodent ulcer of face (left side) in a man 96 years of age. It is of some years' standing, the ulcer healing in one direction, but making slow progress in another. I am at present using a dilute solution of echafolta, and it seems to help, but if anything is better, I should like to try it. I have been a subscriber for your journal almost from its inception, and I cannot do without it."

We regret to advise you that very little impression can be made upon a rodent ulcer of several years' standing in a patient of such advanced age; but, besides, you do not state whether the ulcer presents the usual characteristics, as, for example, slight, if any, elevation of margin, continuous ulceration, almost entire absence of new growth; neither do you say anything about possible earlier cauterization having been performed.

Of course, it is not always possible to employ caustics; still, it is essential, wherever possible, to destroy or remove the epitheliomatous tissue. A surgeon would operate, while dermatologists, as a rule, favor the application of caustics. In the following we present an outline of our own method of treatment of rodent ulcer.

First curette the growth thoroughly. After the oozing has ceased, apply, on a piece of rubber plaster, the following paste: Arsenous acid, 1 dram; powdered acacia, 1 dram; cocaine hydrochloride, 2 grains; triturate well, then add just enough water to form a smooth, creamy paste. Leave this paste on the lesion for from eighteen to thirty-six hours. Morphine, hypodermically, may have to be given to control the intense pain. Upon removing the plaster, you will find a black mass surrounded by an inflamed area. Now apply hot poultices until this slough comes away, then dress as you would any clean wound. Nuclein, bovinine or iodoform gauze will prove efficacious at this point. If the diseased tissue has not come away completely, a second application of the caustic may be necessary. You might also apply to the ulcer equal parts of thuja and echinacea. Another good application, after the slough has separated, is a mixture of equal parts of scarlet-red ointment and alicphen, spread on sterile gauze.

In addition, we should give the patient arsenic internally in the form either of the arsenates of iron, quinine, and strychnine, with nuclein, one tablet after each meal, or else 5 drops of liquor arsenii compositus in 6 ounces of water, at similar intervals.

If operation, as well as the use of the caustic paste, are out of the question, you may still give the internal remedies suggested above; also maintain free elimination.

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QUERY 6060.—"What Caused the Collapse?" A. R. H., Oklahoma, who says that he has long been a silent member of the "family," feels that he is now able to turn to the alkaloids with confidence in the treatment of "any old case" that comes along and (results warranting) uses them almost exclusively now. "True," he remarks, "there are yet many things for me to learn about the 'definite remedies,' but, since getting a working-equipment, this has been my reliance at all times, although, naturally, I have used other remedies when not exactly sure of the active principle indicated. To say that I devour (figuratively!) my CLINICAL MEDICINE every time a new number arrives is not far from the truth, for sometimes I almost forget to eat, so interested do I get in the many good things it contains.

"Now I must tell you of a (to me) most interesting case of typhoid fever in which the alkaloids proved their worth. On August 5, I was called to a man 71 years of age, who had that day returned from a two-months' visiting-trip in several of the western states. He had been sick eleven days at the time he returned, and, after examining the man and reviewing his history, my diagnosis was, typhoid fever, although his temperature was only 100° F., and to the best of his knowledge had not been higher since becoming sick. There was a slight tympanitic condition of the abdomen and constipation. At the time I saw him first, he had the furred tongue, and, barring the low temperature, it was in all respects a typical case of typhoid fever.

"I put the patient at once on calomel (1-6 grain every hour, for six doses), laxative saline, and the combined sulphocarbolates, besides strychnine arsenate, 1-64 grain, every three hours. When I saw him next morning, my heart almost went to my boots, for—from some cause, to me as yet unknown—the man was almost in complete collapse: temperature, 97.6 degrees, and no radial pulse discernible. My first thought was, hemorrhage; which a thorough examination failed to reveal, however, either then or afterward. I at once administered glonoin and strychnine hypodermically, crowding them to the limit for the next three hours, when I had the extreme pleasure of seeing my patient rally and his temperature return to normal. I visited the patient three times each day until August 19, the family being very much concerned (as was the doctor), and I never again found his temperature higher than 100° F. in all that time. Frequently it would drop to 97.8 or lower for a few minutes, then under the effect of stimulants come back to normal or again rise to 100. I kept up the "cleanup, clean-out and keep-clean" campaign throughout, together with daily spongings with tepid water.

"He was fed principally on buttermilk prepared with the aid of the tablets. Of this, he was allowed one quart a day. I also gave him albumin-water in the intervals, and at times a swallow of eggnog was given. Every third day he would get a saline laxative in the early morning, and the strychnine was given as often as necessary, mostly three times daily.

"After August 20, there was no further trouble regarding the low temperature, and the patient made an uneventful recovery. Today he is fleshier than for years and feels fine, except that, as he sometimes says, one of his legs 'doesn't work right.' I feel confident that my diagnosis was right, for the family told me several days later that a doctor in Kansas had made the same diagnosis the day previous to the man's return home.

"Now, will someone of the 'family,' or the editor tell me what caused that collapse?"

Frankly, doctor, we are inclined to think that in this particular case the diagnosis was somewhat of the "snap" variety. It is possible, of course, that the patient did have typhoid fever; the clinical picture, however, is far from being distinct. You do not make mention of positive Widal or diazo reactions. It certainly would have been worth while to have had the blood and urine examined.

The persistent low temperature is decidedly peculiar. Morning remissions seem to be entirely absent. It would be interesting to learn the pulse rate; for, as we know, the condition of the pulse really is more important than the range of temperature.

Doubtless you recall that typhoid fever very rarely is observed in individuals over the age of sixty. However, it would be in such cases that we would expect to find an atypical clinical picture. The obstinate constipation referred to and slight elevation of temperature may have resulted from fecal retention and the collapse have been caused by the cathartic action of the calomel. More than once collapse has followed the passage of a hard fecal mass over a congested rectal surface; but even the sudden recession of the intestinal distention consequent upon the presence of a large fecal accumulation has been followed by collapse.

You say that the patient, who is 72 years old, "had been sick eleven days," before you first saw him. Were there or had there been any rose-spots? If the Kansas physician diagnosed typhoid fever the day before the patient returned home, he must have been, we should say, in the stage of advance, and we should have expected a steplike gradation in temperature by the time you took charge (presumably the second week of the illness); fever should have assumed the continued type, with fairly well-marked morning remissions.

You do not mention enlargement of the spleen or tenderness in the right iliac fossa. Had the stools the typical typhoid odor? Was the pulse of low tension and dicrotic? You would feel infinitely more satisfied, doctor, had you confirmed your diagnosis by the examination of the urine and blood, including the specific tests.

The chief confirmatory evidence, in our opinion, lies in the involvement of "one of the patient's legs." Venous thrombosis, most often in the left lower limb, is peculiarly characteristic of typhoid fever; the femoral, long saphenous and popliteal veins becoming most frequently thrombosed; the symptoms being pain and edema of the affected part.

Periostitis, owing to the typhoid bacillus or to pyogenic germs, is not an uncommon sequel. The tibia is the bone most frequently attacked, the first symptom being pain; a small swelling may be palpable. In addition, we must not forget the possibility of typhoid spine. In its milder form, this is characterized merely by some pain, rigidity, exaggerated knee-jerk, and some restriction of motion of one leg.

While congratulating you upon the successful handling of this obscure case, yet, we cannot regard the diagnosis of typhoid fever as being established.

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QUERY 6061.—"Vaccine for Sinusitis." A. E. M., Minnesota, asks advice on the vaccine treatment of purulent sphenoiditis.

We hardly need mention that in the condition named various ocular troubles frequently are encountered, notably photophobia, amblyopia, loss of accommodation. Inspection of the nasal fossa reveals pus in the superior meatus; posterior rhinoscopy may reveal pus in the nasopharynx and the anterior wall of the sphenoidal sinus.

If the pus is confined, the pain in that region is intense and of a throbbing character. Unless the pressure is relieved, the retained pus will break through the sinus at the point of least resistance, usually at the site of the ostium, but occasionally through the roof, causing fatal suppurative meningitis.

A specimen of such pus should be forwarded to some pathologist for examination, and an autogenous bacterin prepared from it. The sinus may be reached with a probe or catheter entering at the ostium, and a specimen of pus can be secured upon the point.

The best method of probing the sinus is by means of a flexible probe, bent to a slight curve, and passed into the nasal fossa with the convexity upward. The point of the probe must follow the roof of the nasal cavity, along the cribiform plate between the middle turbinate and the septum, until it strikes a resistance-plane, which is the anterior face of the sphenoidal sinus. The operator then reaches for the ostium by moving the probe in various directions until it enters a cavity, the depth of which may lead him to believe that he has entered the cranial fossa; closer probing, though, will reveal the cavity to average about 1.5 cm. in depth. By means of posterior rhinoscopy, the probe may be seen in the ostium.

The treatment is surgical, of course, the procedure for which may be found in any modern work on the nose and throat; also, in Keen's "Surgery," volume iii.

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QUERY 6062. — "Goiter. Vaginismus. 'Thrush.'" A. McL., Kansas, wants us to give him a course of treatment for simple goiter, or bronchocele, "something that will do the work in the majority of instances."

The Doctor also requests advice in the case of a woman whose vaginal sphincter contracts so forcibly in coitus as to render union impossible for a while. Several excellent doctors have tried vaginal dilatation, also other measures, but the trouble invariably returns. The woman has borne no children and claims to be past the climacteric.

Thirdly, what can be done in a typical case of thrush; the man has also a chronic catarrh. The roof of the mouth is covered with a thick whitish-gray coat that has to be mechanically removed daily. He suffers much discomfort and his throat and fauces feel extremely dry. The Doctor concludes by writing: "I am a great admirer of the active principles and the positive therapy you teach."

A "basal" treatment for simple goiter which proves effective in very many cases is, briefly, as follows: Internal medication: strychnine arsenate, gr. 1-128; ergotin, gr. 1-6; quinine ferrocyanide, gr. 1-32; such a dose every four hours. Irisoid, gr. 1-6; and phytolaccoid, gr. 1-3, half an hour before food; calx iodata, grs. 5, three times a day, preferably on an empty stomach. Externally: Lay upon the goiter, each night, compresses wrung out of a fairly strong solution of potassium iodide; iodine ointment may be used as alternant. If possible, once or twice a week attach the negative pole of the galvanic current to the compress for fifteen minutes, in order to secure cataphoresis.

Vaginismus, or, spasmodic contraction of the sphincter vaginæ, frequently proves extremely rebellious to treatment, and sometimes a radical operative procedure alone proves effective. The intensity of the symptom varies. In some women, the slightest touch, even the introduction of a catheter, may cause the most severe and painful spastic contracture; in others, the phenomenon occurs only after somewhat prolonged

irritation. The contraction nearly always occurs at the vulvovaginal orifice or just within the vagina; occasionally the spasm involves even the levator ani and muscles of the thighs.

As a matter of course, there always is a cause for this phenomenon, and that must be discovered and removed in order to effect a cure. It is true that a large proportion of women suffering from vaginismus are neurotic or hysteric. It is this writer's opinion, however, that the nervous symptoms more often are the result of preexisting vaginismus, rather than the cause of it.

We find that the irritation proceeding from a torn hymen, a small ulcer, fissure or coitus will set up an obstinate vaginismus; or, also, the trouble may originate from a urethral caruncle, neuroma of the fossa, varicosity or prolapse of the mucous membranes, or fissure of the fourchette, vestibule or anus. In some instances, vulvitis, congestion of the cervix, prolapse of the ovaries or displacement of the uterus have proven to be the cause. In one instance, a dislocated coccyx lay at the bottom of the spasticity.

Occasionally, however, no local lesion or abnormality of any kind can be discovered, there being merely local hyperesthesia, general nervous excitability, and intense dread of coitus; these conditions becoming aggravated, may ultimately result in a most severe form of vaginismus.

Make a most careful examination of your patient and then furnish us as clear a clinical picture as possible. Remember that we can not always discover the local (causative) lesion, as it may have disappeared, leaving the parts in a permanently irritable condition.

Many times the hyperesthesia and contractions can be relieved by the application of a weak solution of cocaine, or similar local anesthetic. The fluid should be gently applied with a cotton mop and the parts then lubricated with an ointment containing some campho-menthol or a little (only) of belladonna ointment. The latter, of course, must be used with caution, especially if applied shortly prior to coitus.

Hot salt sitz-baths frequently act beneficially. Also, excellent results have followed the application of the galvanic, the sinusoidal or high-frequency current, with vacuum electrode. Rectal suppositories containing codeine and hyoscyamine are of some service. In addition, thymol iodide in cottonseed-oil solution may be applied to the vaginal mucosa once or twice a day. Forcible dilatation of the sphincter with a bivalve speculum is the last resort, this writer, though, preferring to stretch the orifice with his thumbs. Many times the occurrence of pregnancy puts an end to this annoying affliction.

Thrush (stomatitis mycosa) is a disease of infancy; but your patient probably suffers from catarrhal stomatitis. This condition may prove rebellious, although it usually yields to thorough elimination and the maintenance of cleanliness of the mouth and intestines.

The patient's mouth must be cleaned out thoroughly several times a day. Give calomel, podophyllin (or irisoid), and bilein half-hourly for four to six doses, and a laxative saline the next morning; repeating this course every third night. Between times keep the bowels active with phenolphthalein or cascara compound; also give 10 grains of the combined sulphocarbolates (in solution) three or four times a day.

Wash and *swab* out the mouth with a solution of peroxide of hydrogen diluted with 2 parts of cinnamon-water, and then with fluid extract of echinacea mixed with 4 parts of water. A resorcinated preparation of calendula has, in the writer's hands, proven almost a specific. Another excellent mouth-wash is composed of boric acid, 10 grains; zinc sulphocarbolate, 5 to 10 grains; glycerin, 1 fluid ounce; water, 3 ounces. This should be used only after the mouth has been thoroughly cleaned with the peroxide of hydrogen solution and cinnamon-water.

Should the condition prove refractory, try galactenzyme tablets, crushed and allowed to dissolve in the patient's mouth; Bulgarian-bacillus bouillon is even better. Of course, the nasal catarrh must be attended to.